

## HBF F400



### AXIAL FAN 400°C/2h

#### MANUFACTURING FEATURES

- Axial fan with circular reinforced frame.
- Modular motor-impeller assembly.
- Cast aluminium impeller with variable pitch angle. Polyester powder finishing coat.
- Standard asynchronous squirrel cage motor with IP-55 protection and Class H insulation certified 400°C/2h. Standard voltages 230/400V 50Hz in three phase motors up to 3kW and 400 50Hz for higher powers and 2 speed motors. IE3 efficiency motor from 0,75kW up to 45kW in single speed

#### APPLICATIONS

- Designed for wall or duct installation, they are suitable for:
- Smoke emergency exhaust with motor inside the hazardous area.
  - Maximum working temperature: 60°C.

#### UNDER REQUEST

- B Form impeller (air flow from impeller to motor).
- 100% reversible impeller.

Official homologation by the European laboratory APPLUS according to EN 12101-3:2015  
 Certification Nr: 0370-CPR-0914

## Accessories



AC



BA-400



BAD



INT



INT  
400



JE 45



MC HB



PC2



PCP



RP0



RP1



SFC

## Technical data

### Three-phase motor / 4 poles

Code	Model	Angle	Min. Rated power kW	Max. Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight t*	Connect. diagram
-	HBF 45 T4 (A5:6) F400	20° - 42,5°	0,75	0,75	6.150	51	15,40	1
-	HBF 50 T4 (A5:6) F400	25° - 45°	0,75	0,75	9.200	55	19,70	1
-	HBF 56 T4 (A5:6) F400	20° - 45°	0,75	1,50	14.630	70	22,50	1
-	HBF 63 T4 (A5:6) F400	20° - 45°	0,75	2,20	20.340	74	26,50	1
-	HBF 71 T4 (A5:6) F400	20° - 45°	0,75	3	27.510	79	30,60	1
-	HBF 80 T4 (A5:6) F400	20° - 45°	2,20	4	34.460	76	36,30	1
-	HBF 90 T4 (A3:4) F400	20° - 42°	3	15	48.110	73	58	1
-	HBF 90 T4 (A3:8) F400	20° - 42°	3	15	54.810	78	63,10	1
-	HBF 100 T4 (A3:4) F400	20° - 42°	5,50	22	67.210	72	70,30	1
-	HBF 100 T4 (A3:8) F400	20° - 42°	5,50	22	77.810	81	75,90	1
-	HBF 112 T4 (A3:4) F400	20° - 42°	7,50	37	92.110	76	79	1
-	HBF 112 T4 (A3:8) F400	20° - 42°	7,50	37	104.010	83	85,10	1
-	HBF 125 T4 (A3:4) F400	20° - 42°	11	45	124.010	83	88,70	1
-	HBF 125 T4 (A3:8) F400	20° - 42°	11	45	141.010	89	95,30	1

### Three-phase motor / 6 poles

Code	Model	Angle	Min. Rated power kW	Max. Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight t*	Connect. diagram
-	HBF 45 T6 (A5:6) F400	25° - 45°	0,75	0,75	4.060	42	15,40	1
-	HBF 50 T6 (A5:6) F400	25° - 45°	0,75	0,75	5.950	46	19,70	1
-	HBF 56 T6 (A5:6) F400	20° - 45°	0,75	0,75	9.760	67	22,50	1
-	HBF 63 T6 (A5:6) F400	20° - 45°	0,75	0,75	13.560	71	26,50	1
-	HBF 71 T6 (A5:6) F400	20° - 45°	0,75	0,75	18.340	76	30,60	1
-	HBF 80 T6 (A5:6) F400	20° - 45°	0,75	2,20	25.190	72	36,30	1
-	HBF 90 T6 (A3:4) F400	20° - 42°	1,50	5,50	31.210	63	58	1
-	HBF 90 T6 (A3:8) F400	20° - 42°	1,50	5,50	35.510	68	63,10	1
-	HBF 100 T6 (A3:4) F400	20° - 42°	1,50	7,50	43.610	63	70,30	1
-	HBF 100 T6 (A3:8) F400	20° - 42°	1,50	7,50	50.410	71	75,90	1
-	HBF 112 T6 (A3:4) F400	20° - 42°	2,20	11	59.710	66	79	1
-	HBF 112 T6 (A3:8) F400	20° - 42°	2,20	11	67.610	73	85,10	1

Code	Model	Angle	Min. Rated power kW	Max. Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weigh t*	Connect. diagram
-	HBF 125 T6 (A3:4) F400	20° - 42°	3	15	80.610	73	88,70	1
-	HBF 125 T6 (A3:8) F400	20° - 42°	3	15	91.410	80	95,30	1

## 2 SPEED MOTOR / 4/8 poles

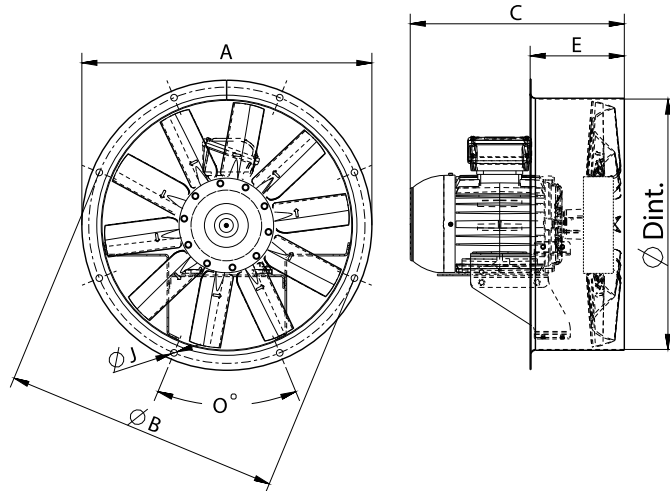
Code	Model	Angle	Min. Rated power kW	Max. Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weigh t*	Connect. diagram
-	HBF 45 T4/T8 (A5:6) F400	20° - 45°	0,75	0,75	7.300	51	15,40	1
-	HBF 50 T4/T8 (A5:6) F400	20° - 45°	0,75	0,75	9.500	55	19,70	1
-	HBF 56 T4/T8 (A5:6) F400	20° - 45°	0,75	1,50	14.630	70	22,50	2
-	HBF 63 T4/T8 (A5:6) F400	20° - 45°	0,75	2,20	20.340	74	26,50	2
-	HBF 71 T4/T8 (A5:6) F400	20° - 45°	0,75	3	27.510	79	30,60	2
-	HBF 80 T4/T8 (A5:6) F400	20° - 45°	2,20	4	34.460	76	36,30	2
-	HBF 90 T4/T8 (A3:4) F400	20° - 42°	3	10	48.110	73	58	2
-	HBF 90 T4/T8 (A3:8) F400	20° - 42°	5,50	16,50	54.810	78	63,10	2
-	HBF 100 T4/T8 (A3:4) F400	20° - 42°	5,50	16,50	67.210	72	70,30	2
-	HBF 100 T4/T8 (A3:8) F400	20° - 42°	10	20	77.810	81	75,90	2
-	HBF 112 T4/T8 (A3:4) F400	20° - 42°	7,50	20	92.110	76	79	2
-	HBF 112 T4/T8 (A3:8) F400	20° - 42°	14	35	104.010	83	85,10	2
-	HBF 125 T4/T8 (A3:4) F400	20° - 42°	10	35	124.010	83	88,70	2
-	HBF 125 T4/T8 (A3:8) F400	20° - 42°	16,50	40	141.010	89	95,30	2

**Notes:**

\* The motor is not included in fan weight

\*\* Total sound pressure level at the point of maximum flow measured in dB(A) in the suction measured in free field at a distance of 6m from the source

## Dimensions



Model	C (Mot. T.63)	C (Mot. T.71)	C (Mot. T.80)	C (Mot. T.90L)	C (Mot. T.90S)	C (Mot. T.100L)	C (Mot. T.112)	C (Mot. T.112M)	C (Mot. T.132)
HBF 45 T4 (A5:6) F400	328	328	347	387	362	418	-	-	-
HBF 45 T6 (A5:6) F400	328	328	347	387	362	418	-	-	-
HBF 45 T4/T8 (A5:6) F400	328	328	347	387	362	418	-	-	-
HBF 50 T4 (A5:6) F400	-	338	350	387	362	421	-	-	-
HBF 50 T6 (A5:6) F400	-	338	350	387	362	421	-	-	-
HBF 50 T4/T8 (A5:6) F400	-	338	350	387	362	421	-	-	-
HBF 56 T4 (A5:6) F400	-	338	352	387	362	423	-	-	-
HBF 56 T6 (A5:6) F400	-	338	352	387	362	423	-	-	-
HBF 56 T4/T8 (A5:6) F400	-	338	352	387	362	423	-	-	-
HBF 63 T4 (A5:6) F400	-	-	352	411	386	442	-	463	-
HBF 63 T6 (A5:6) F400	-	-	352	411	386	442	-	463	-
HBF 63 T4/T8 (A5:6) F400	-	-	352	411	386	442	-	463	-
HBF 71 T4 (A5:6) F400	-	-	357	416	391	447	-	468	-
HBF 71 T6 (A5:6) F400	-	-	357	416	391	447	-	468	-
HBF 71 T4/T8 (A5:6) F400	-	-	357	416	391	447	-	468	-
HBF 80 T4 (A5:6) F400	-	-	-	427	427	463	-	469	-
HBF 80 T6 (A5:6) F400	-	-	-	427	427	463	-	469	-
HBF 80 T4/T8 (A5:6) F400	-	-	-	427	427	463	-	469	-
HBF 90 T4 (A3:4) F400	-	-	-	-	-	658	658	-	658
HBF 90 T4 (A3:8) F400	-	-	-	-	-	658	658	-	658
HBF 90 T6 (A3:4) F400	-	-	-	-	-	658	658	-	658
HBF 90 T6 (A3:8) F400	-	-	-	-	-	658	658	-	658
HBF 90 T4/T8 (A3:4) F400	-	-	-	-	-	658	658	-	658
HBF 90 T4/T8 (A3:8) F400	-	-	-	-	-	658	658	-	658

Model	C (Mot. T.63)	C (Mot. T.71)	C (Mot. T.80)	C (Mot. T.90L)	C (Mot. T.90S)	C (Mot. T.100L)	C (Mot. T.112)	C (Mot. T.112M)	C (Mot. T.132)
HBF 100 T4 (A3:4) F400	-	-	-	-	-	-	-	-	653
HBF 100 T4 (A3:8) F400	-	-	-	-	-	-	-	-	653
HBF 100 T6 (A3:4) F400	-	-	-	-	-	-	-	-	653
HBF 100 T6 (A3:8) F400	-	-	-	-	-	-	-	-	653
HBF 100 T4/T8 (A3:4) F400	-	-	-	-	-	-	-	-	653
HBF 100 T4/T8 (A3:8) F400	-	-	-	-	-	-	-	-	653
HBF 112 T4 (A3:4) F400	-	-	-	-	-	-	-	-	760
HBF 112 T4 (A3:8) F400	-	-	-	-	-	-	-	-	760
HBF 112 T6 (A3:4) F400	-	-	-	-	-	-	-	-	760
HBF 112 T6 (A3:8) F400	-	-	-	-	-	-	-	-	760
HBF 112 T4/T8 (A3:4) F400	-	-	-	-	-	-	-	-	760
HBF 112 T4/T8 (A3:8) F400	-	-	-	-	-	-	-	-	760
HBF 125 T4 (A3:4) F400	-	-	-	-	-	-	-	-	759
HBF 125 T4 (A3:8) F400	-	-	-	-	-	-	-	-	759
HBF 125 T6 (A3:4) F400	-	-	-	-	-	-	-	-	759
HBF 125 T6 (A3:8) F400	-	-	-	-	-	-	-	-	759
HBF 125 T4/T8 (A3:4) F400	-	-	-	-	-	-	-	-	759
HBF 125 T4/T8 (A3:8) F400	-	-	-	-	-	-	-	-	759

Model	C (Mot. T.132M)	C (Mot. T.132S)	C (Mot. T.160L)	C (Mot. T.160M)	C (Mot. T.180L)	C (Mot. T.180M)	C (Mot. T.200)	C (Mot. T.225)	E
HBF 45 T4 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 45 T6 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 45 T4/T8 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 50 T4 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 50 T6 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 50 T4/T8 (A5:6) F400	-	-	-	-	-	-	-	-	165
HBF 56 T4 (A5:6) F400	-	-	-	-	-	-	-	-	175
HBF 56 T6 (A5:6) F400	-	-	-	-	-	-	-	-	175
HBF 56 T4/T8 (A5:6) F400	-	-	-	-	-	-	-	-	175
HBF 63 T4 (A5:6) F400	-	-	-	-	-	-	-	-	185
HBF 63 T6 (A5:6) F400	-	-	-	-	-	-	-	-	185
HBF 63 T4/T8 (A5:6) F400	-	-	-	-	-	-	-	-	185
HBF 71 T4 (A5:6) F400	-	-	-	-	-	-	-	-	190
HBF 71 T6 (A5:6) F400	-	-	-	-	-	-	-	-	190
HBF 71 T4/T8 (A5:6) F400	-	-	-	-	-	-	-	-	190
HBF 80 T4 (A5:6) F400	563	525	-	-	-	-	-	-	220
HBF 80 T6 (A5:6) F400	563	525	-	-	-	-	-	-	220
HBF 80 T4/T8 (A5:6) F400	563	525	-	-	-	-	-	-	220
HBF 90 T4 (A3:4) F400	-	-	742	721	787	778	-	-	340

Model	C (Mot. T.132M)	C (Mot. T.132S)	C (Mot. T.160L)	C (Mot. T.160M)	C (Mot. T.180L)	C (Mot. T.180M)	C (Mot. T.200)	C (Mot. T.225)	E
HBF 90 T4 (A3:8) F400	-	-	742	721	787	778	-	-	340
HBF 90 T6 (A3:4) F400	-	-	742	721	787	778	-	-	340
HBF 90 T6 (A3:8) F400	-	-	742	721	787	778	-	-	340
HBF 90 T4/T8 (A3:4) F400	-	-	742	721	787	778	-	-	340
HBF 90 T4/T8 (A3:8) F400	-	-	742	721	787	778	-	-	340
HBF 100 T4 (A3:4) F400	-	-	738	716	792	776	-	-	340
HBF 100 T4 (A3:8) F400	-	-	738	716	792	776	-	-	340
HBF 100 T6 (A3:4) F400	-	-	738	716	792	776	-	-	340
HBF 100 T6 (A3:8) F400	-	-	738	716	792	776	-	-	340
HBF 100 T4/T8 (A3:4) F400	-	-	738	716	792	776	-	-	340
HBF 100 T4/T8 (A3:8) F400	-	-	738	716	792	776	-	-	340
HBF 112 T4 (A3:4) F400	-	-	760	760	780	761	864	949	340
HBF 112 T4 (A3:8) F400	-	-	760	760	780	761	864	949	340
HBF 112 T6 (A3:4) F400	-	-	760	760	780	761	864	949	340
HBF 112 T6 (A3:8) F400	-	-	760	760	780	761	864	949	340
HBF 112 T4/T8 (A3:4) F400	-	-	760	760	780	761	864	949	340
HBF 112 T4/T8 (A3:8) F400	-	-	760	760	780	761	864	949	340
HBF 125 T4 (A3:4) F400	-	-	759	759	779	760	863	948	340
HBF 125 T4 (A3:8) F400	-	-	759	759	779	760	863	948	340
HBF 125 T6 (A3:4) F400	-	-	759	759	779	760	863	948	340
HBF 125 T6 (A3:8) F400	-	-	759	759	779	760	863	948	340
HBF 125 T4/T8 (A3:4) F400	-	-	759	759	779	760	863	948	340
HBF 125 T4/T8 (A3:8) F400	-	-	759	759	779	760	863	948	340

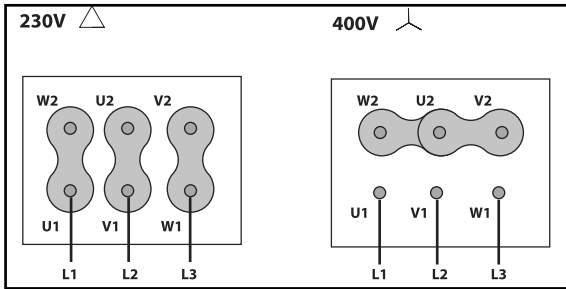
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HBF 45 T4/T8 (A5:6) F400	8X45º	525	500	452	12
HBF 50 T4 (A5:6) F400	12x30º	600	560	504	12
HBF 50 T6 (A5:6) F400	12x30º	600	560	504	12
HBF 50 T4/T8 (A5:6) F400	12x30º	600	560	504	12
HBF 56 T4 (A5:6) F400	12X30º	646	620	559	12
HBF 56 T6 (A5:6) F400	12X30º	646	620	559	12
HBF 56 T4/T8 (A5:6) F400	12X30º	646	620	559	12
HBF 63 T4 (A5:6) F400	12X30º	725	690	633	12
HBF 63 T6 (A5:6) F400	12X30º	725	690	633	12
HBF 63 T4/T8 (A5:6) F400	12X30º	725	690	633	12
HBF 71 T4 (A5:6) F400	16x22,5º	802	770	715	12
HBF 71 T6 (A5:6) F400	16x22,5º	802	770	715	12
HBF 71 T4/T8 (A5:6) F400	16x22,5º	802	770	715	12

Model	O	ØA	ØB	ØD	ØJ
HBF 80 T4 (A5:6) F400	16x22,5º	892	860	801	12
HBF 80 T6 (A5:6) F400	16x22,5º	892	860	801	12
HBF 80 T4/T8 (A5:6) F400	16x22,5º	892	860	801	12
HBF 90 T4 (A3:4) F400	16x22,5º	1000	970	903.5	12
HBF 90 T4 (A3:8) F400	16x22,5º	1000	970	903.5	12
HBF 90 T6 (A3:4) F400	16x22,5º	1000	970	903.5	12
HBF 90 T6 (A3:8) F400	16x22,5º	1000	970	903.5	12
HBF 90 T4/T8 (A3:4) F400	16x22,5º	1000	970	903.5	12
HBF 90 T4/T8 (A3:8) F400	16x22,5º	1000	970	903.5	12
HBF 100 T4 (A3:4) F400	16x22,5º	1115	1070	1013	12
HBF 100 T4 (A3:8) F400	16x22,5º	1115	1070	1013	12
HBF 100 T6 (A3:4) F400	16x22,5º	1115	1070	1013	12
HBF 100 T6 (A3:8) F400	16x22,5º	1115	1070	1013	12
HBF 100 T4/T8 (A3:4) F400	16x22,5º	1115	1070	1013	12
HBF 100 T4/T8 (A3:8) F400	16x22,5º	1115	1070	1013	12
HBF 112 T4 (A3:4) F400	16x22,5º	1234	1190	1132	12
HBF 112 T4 (A3:8) F400	16x22,5º	1234	1190	1132	12
HBF 112 T6 (A3:4) F400	16x22,5º	1234	1190	1132	12
HBF 112 T6 (A3:8) F400	16x22,5º	1234	1190	1132	12
HBF 112 T4/T8 (A3:4) F400	16x22,5º	1234	1190	1132	12
HBF 112 T4/T8 (A3:8) F400	16x22,5º	1234	1190	1132	12
HBF 125 T4 (A3:4) F400	20x18º	1365	1320	1263	15
HBF 125 T4 (A3:8) F400	20x18º	1365	1320	1263	15
HBF 125 T6 (A3:4) F400	20x18º	1365	1320	1263	15
HBF 125 T6 (A3:8) F400	20x18º	1365	1320	1263	15
HBF 125 T4/T8 (A3:4) F400	20x18º	1365	1320	1263	15
HBF 125 T4/T8 (A3:8) F400	20x18º	1365	1320	1263	15

# Wiring diagram

DIAGRAM Nº 1

230/400V



400/690V

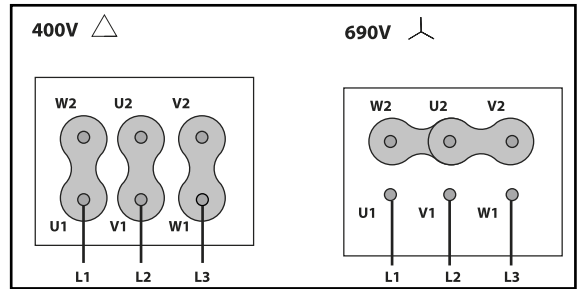
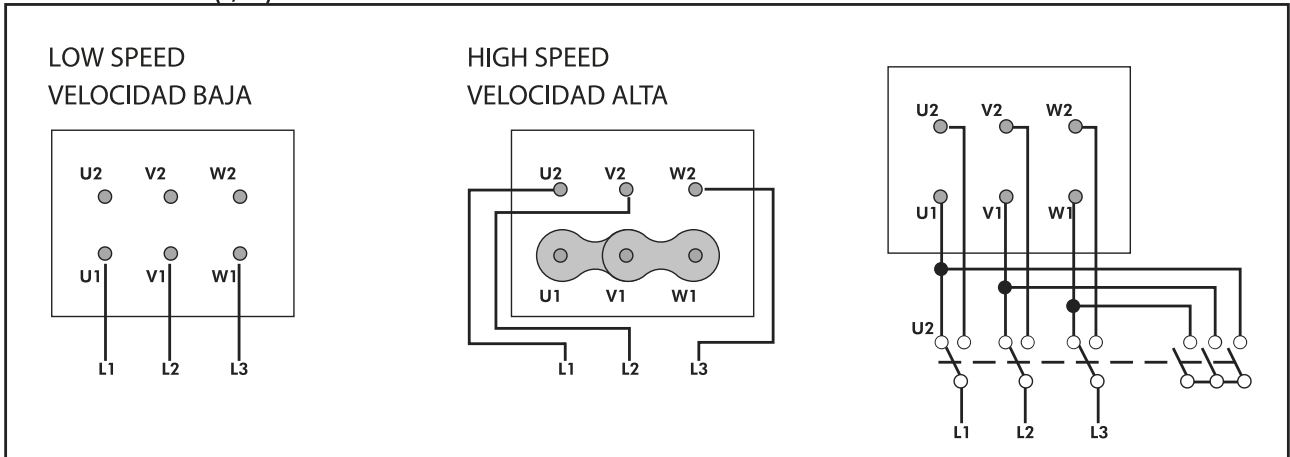


DIAGRAM Nº 2

400V DAHLANDER (Y,YY)

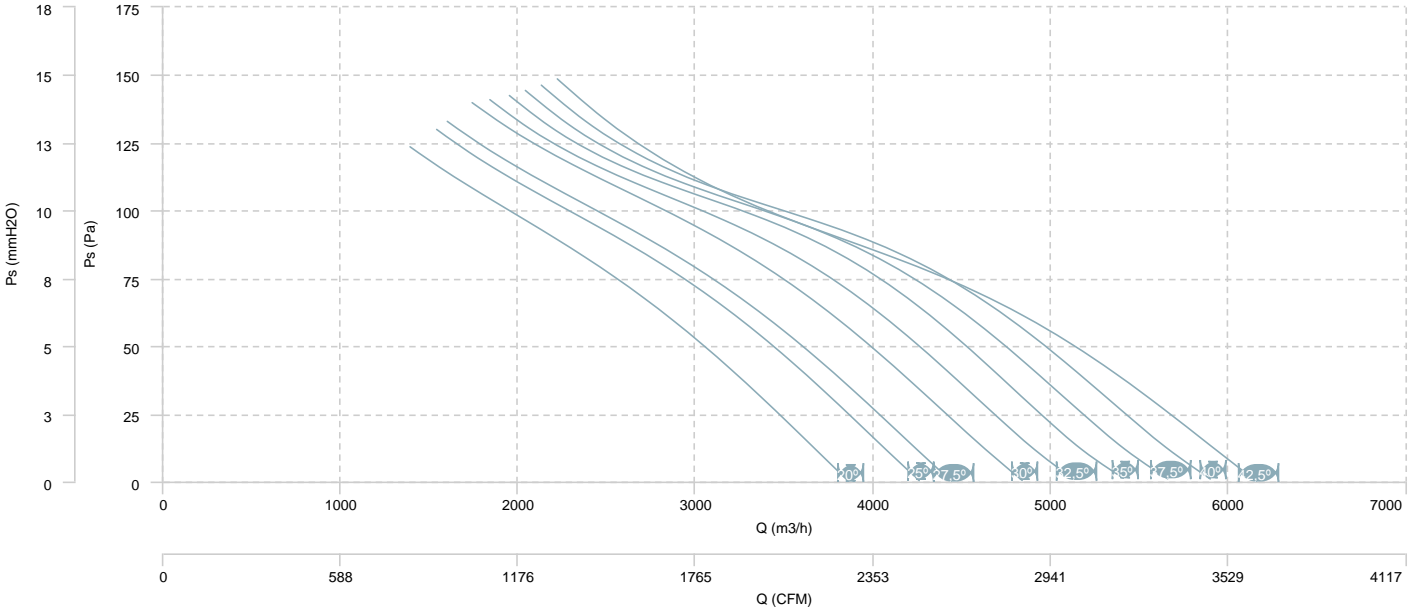




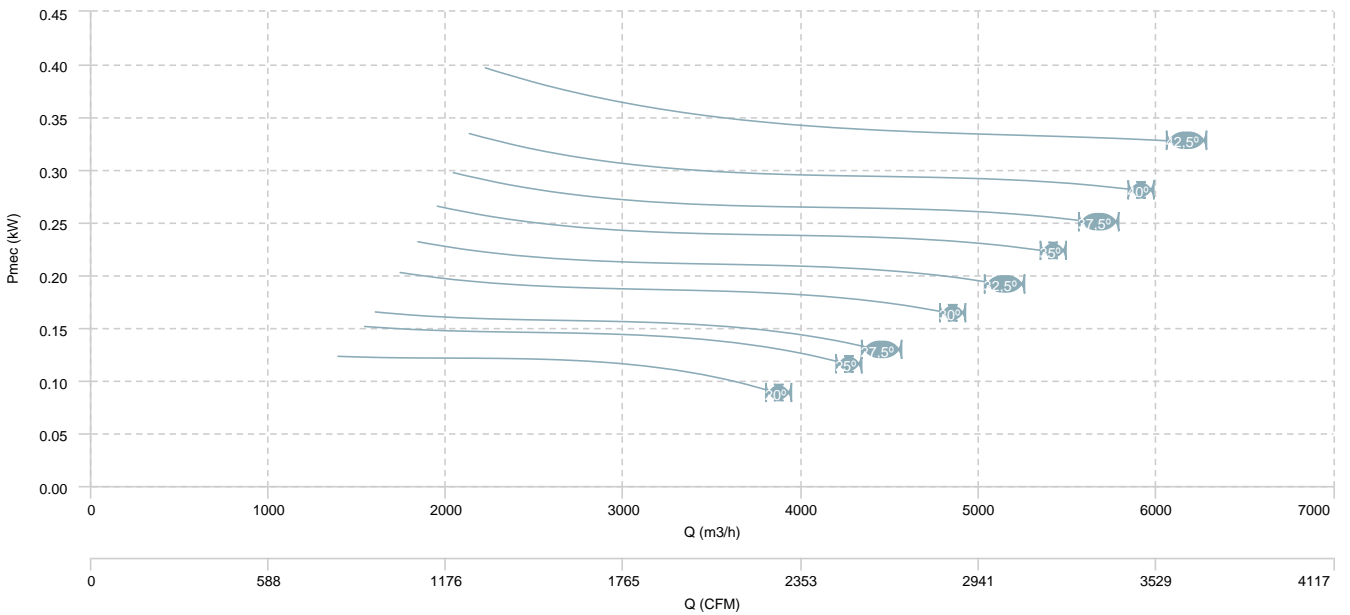
# CHARACTERISTIC CURVE

HBF 45 T4 (A5:6) F400

## AIR FLOW - PRESSURE

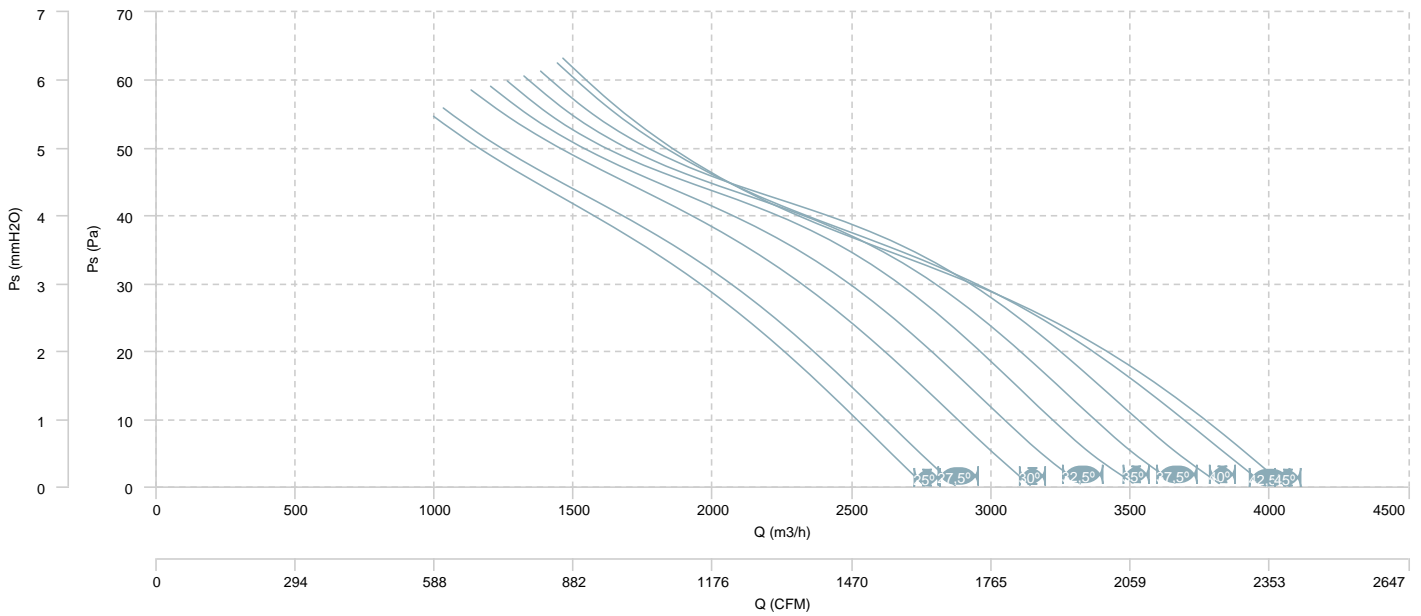


## AIR FLOW - MECHANICAL POWER

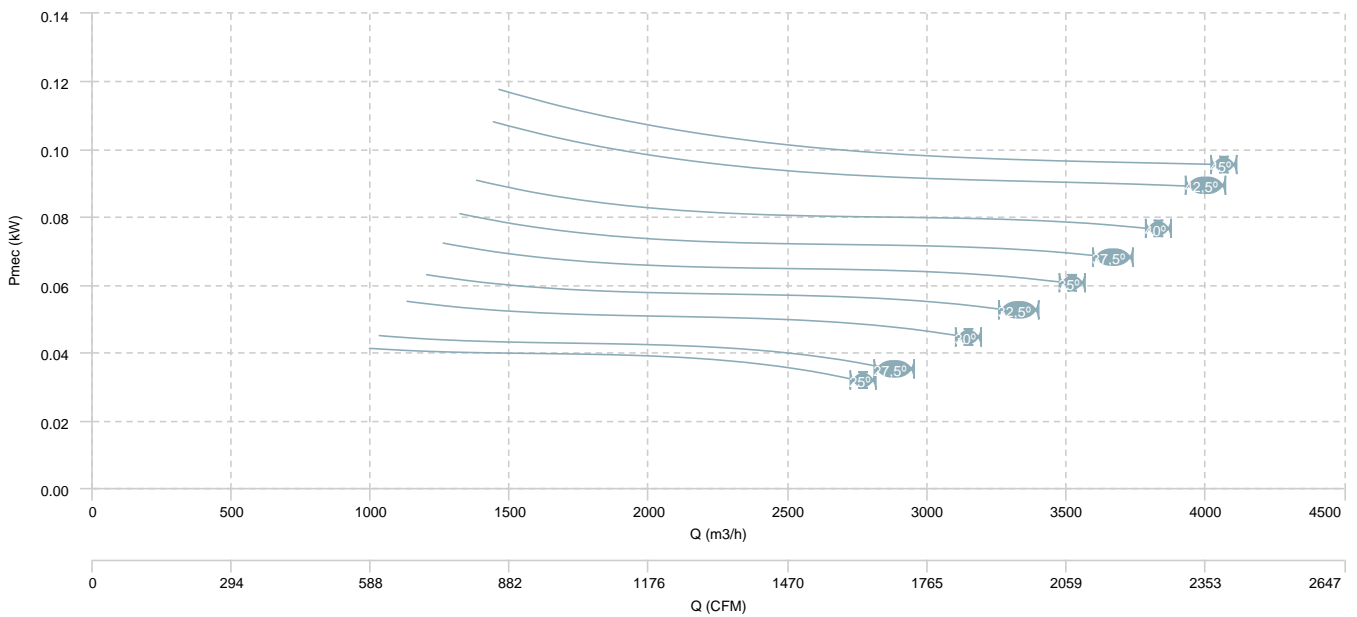


HBF 45 T6 (A5:6) F400

AIR FLOW - PRESSURE

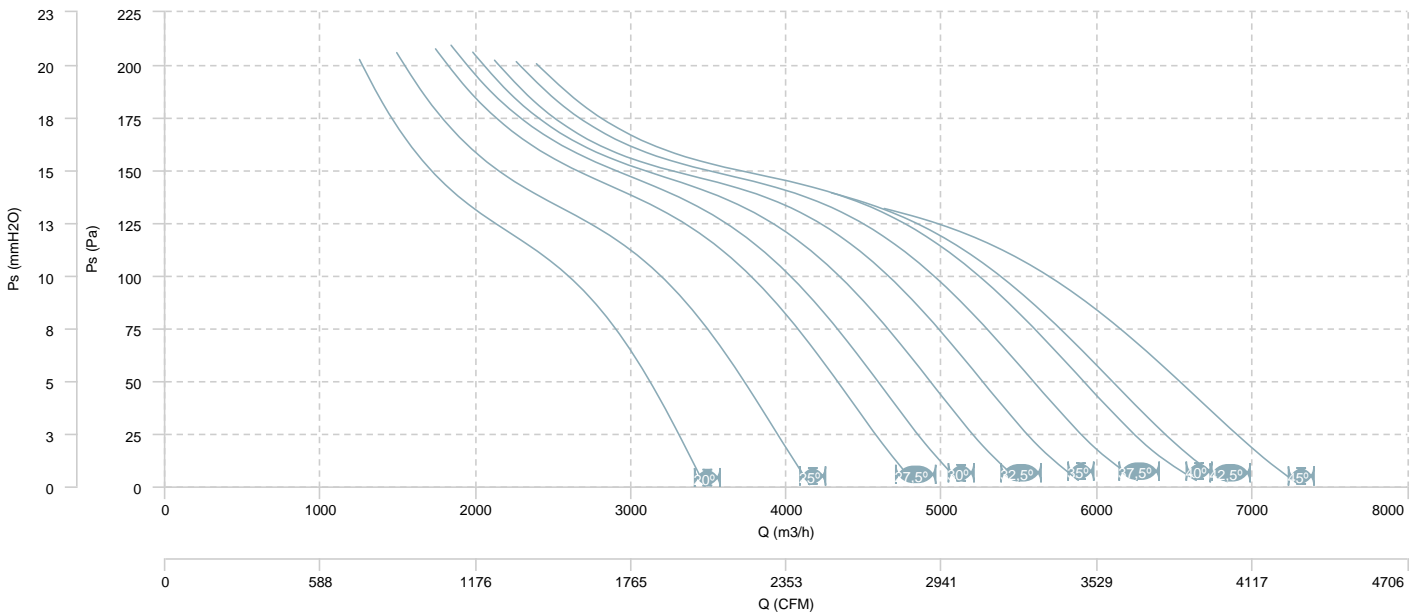


AIR FLOW - MECHANICAL POWER

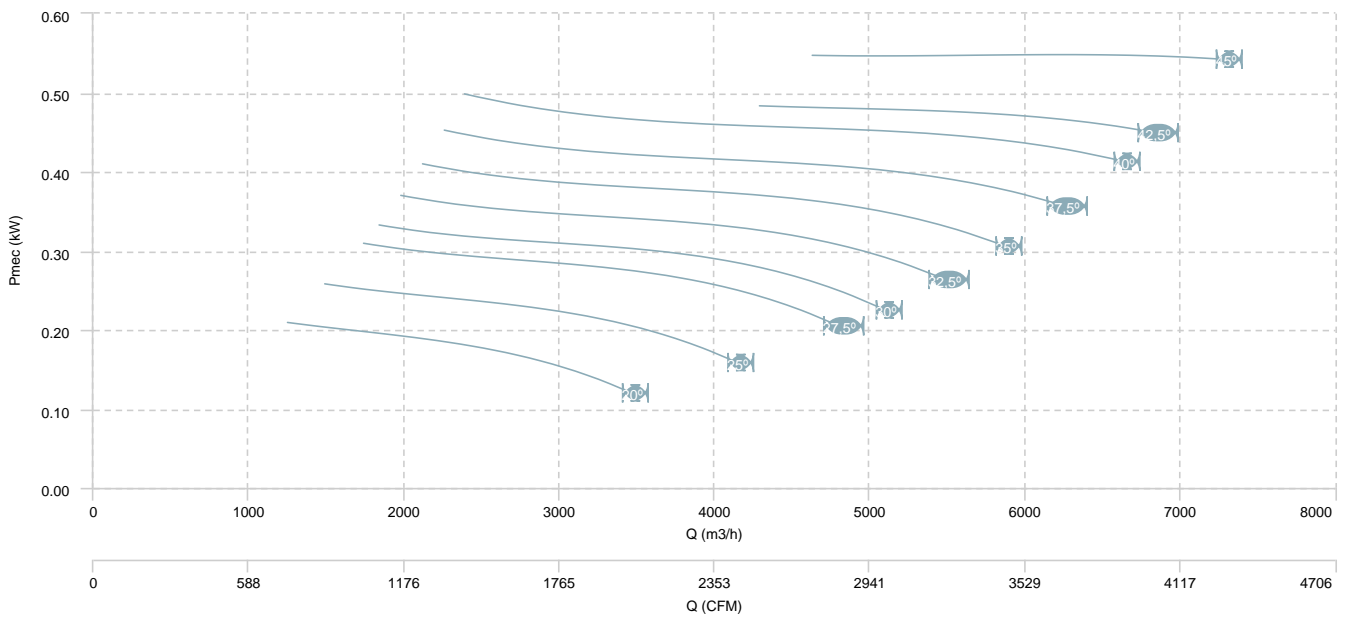


HBF 45 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (4 poles)**



**AIR FLOW - MECHANICAL POWER (4 poles)**

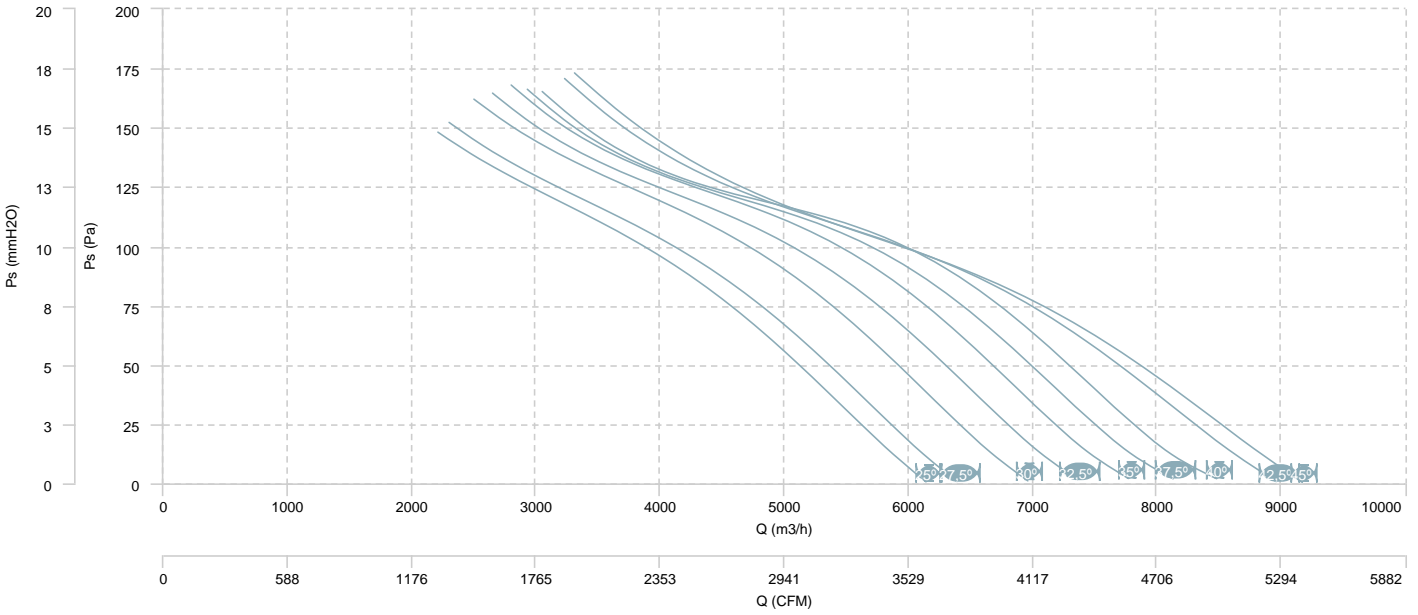


HBF 45 T4/T8 (A5:6) F400

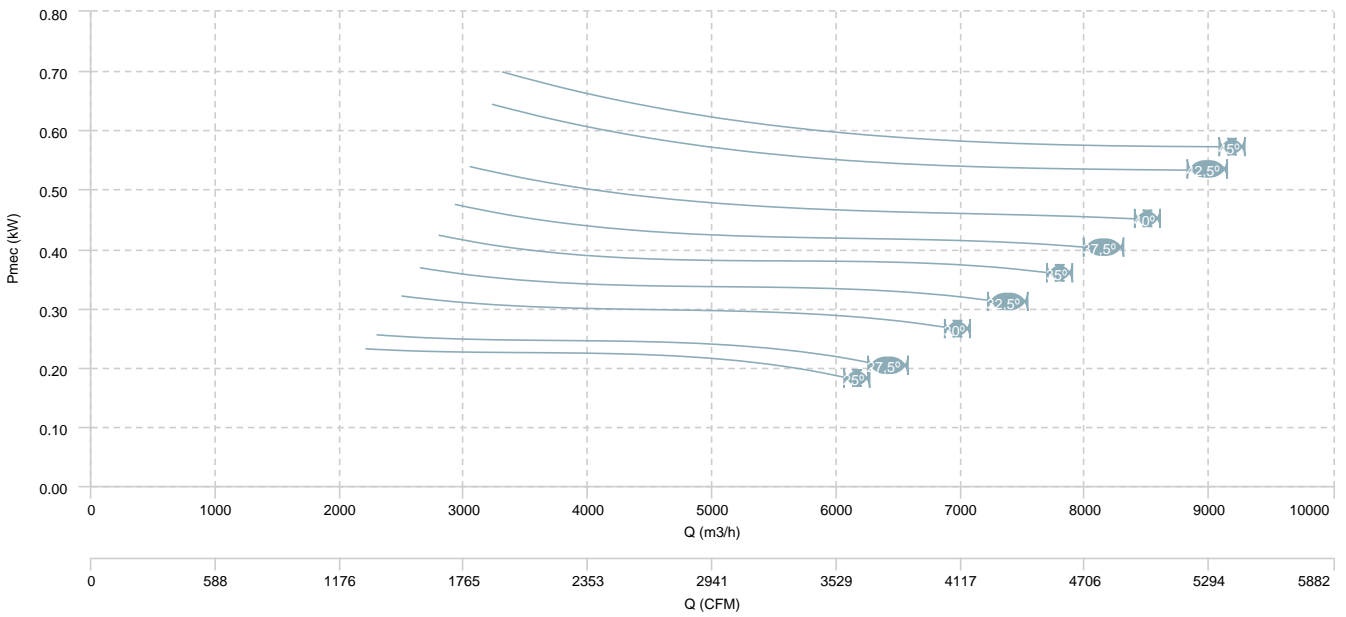
**AIR FLOW - PRESSURE (8 poles)**

HBF 50 T4 (A5:6) F400

AIR FLOW - PRESSURE

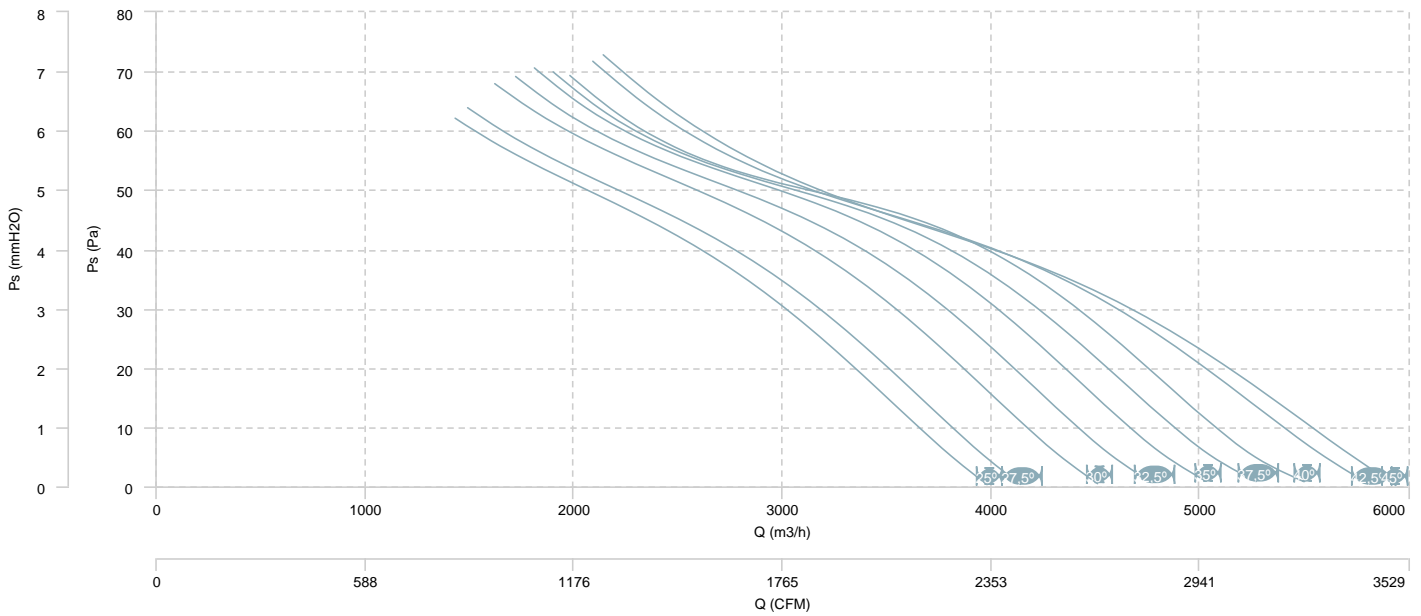


AIR FLOW - MECHANICAL POWER

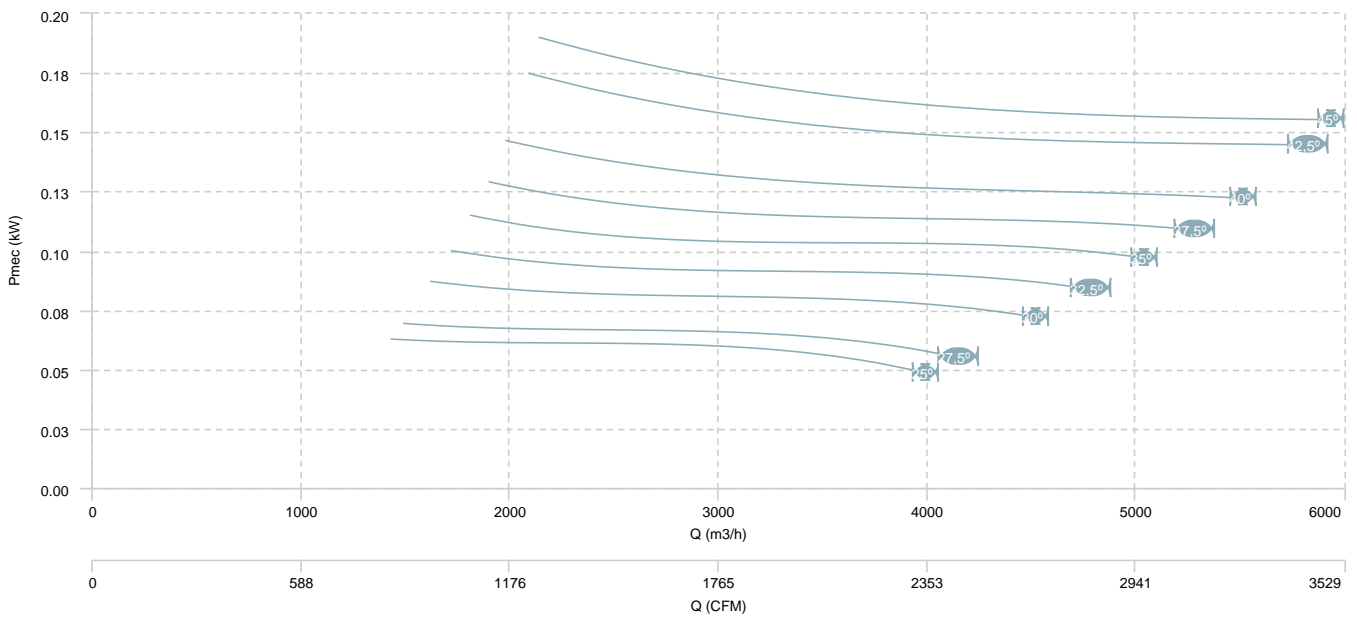


HBF 50 T6 (A5:6) F400

**AIR FLOW - PRESSURE**

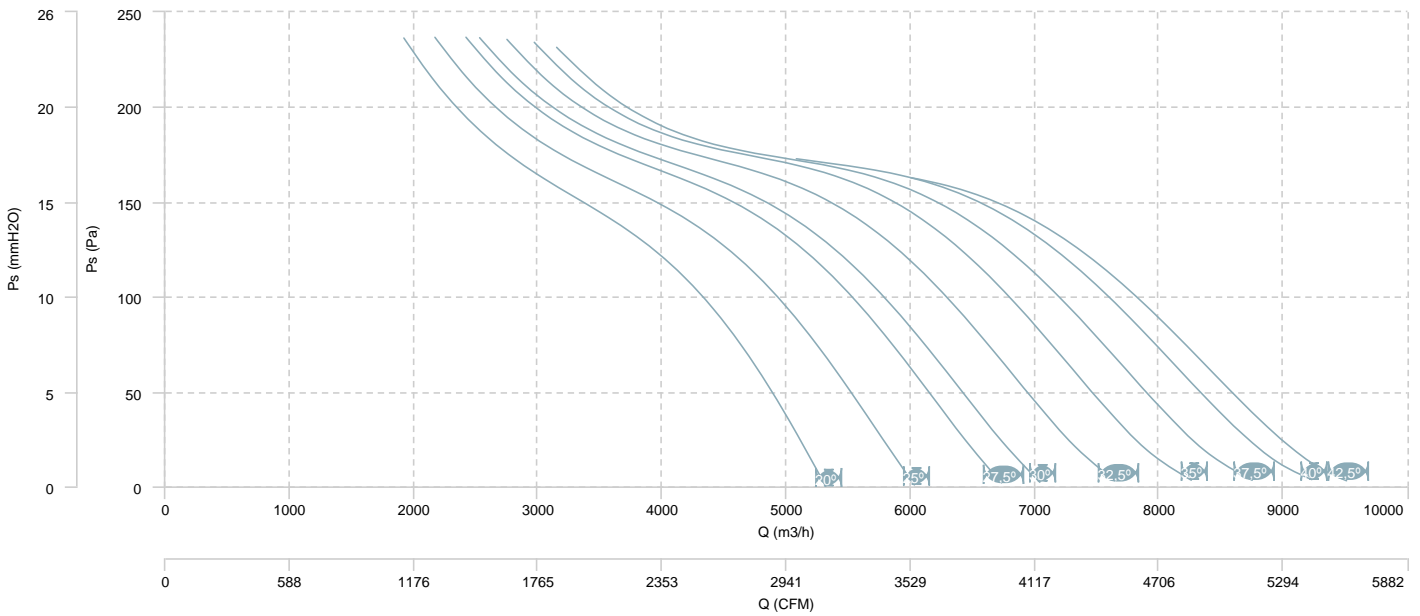


**AIR FLOW - MECHANICAL POWER**

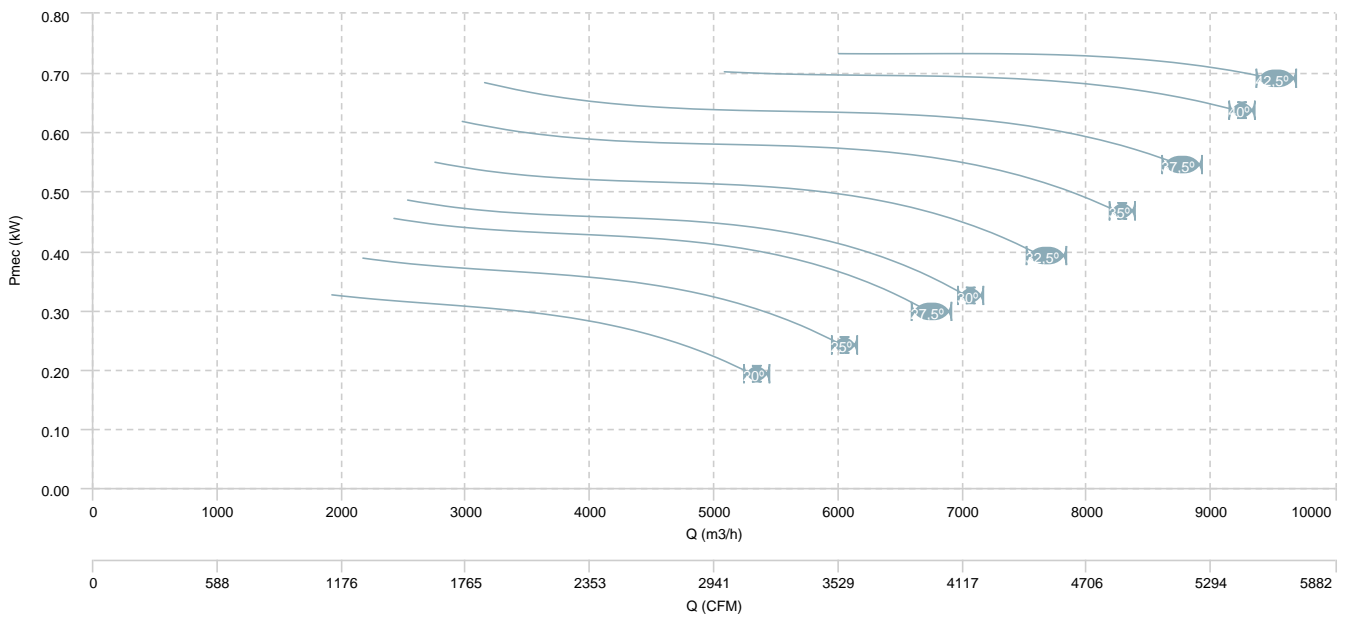


HBF 50 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (4 poles)**



**AIR FLOW - MECHANICAL POWER (4 poles)**



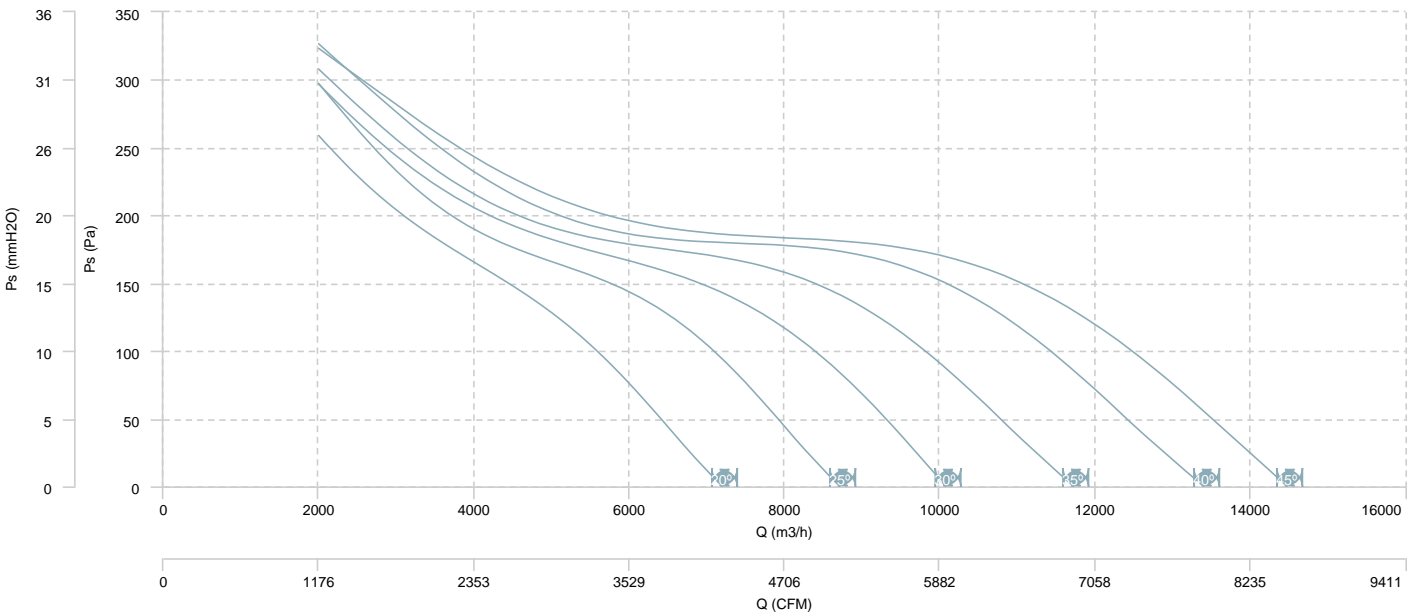
HBF 50 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (8 poles)**

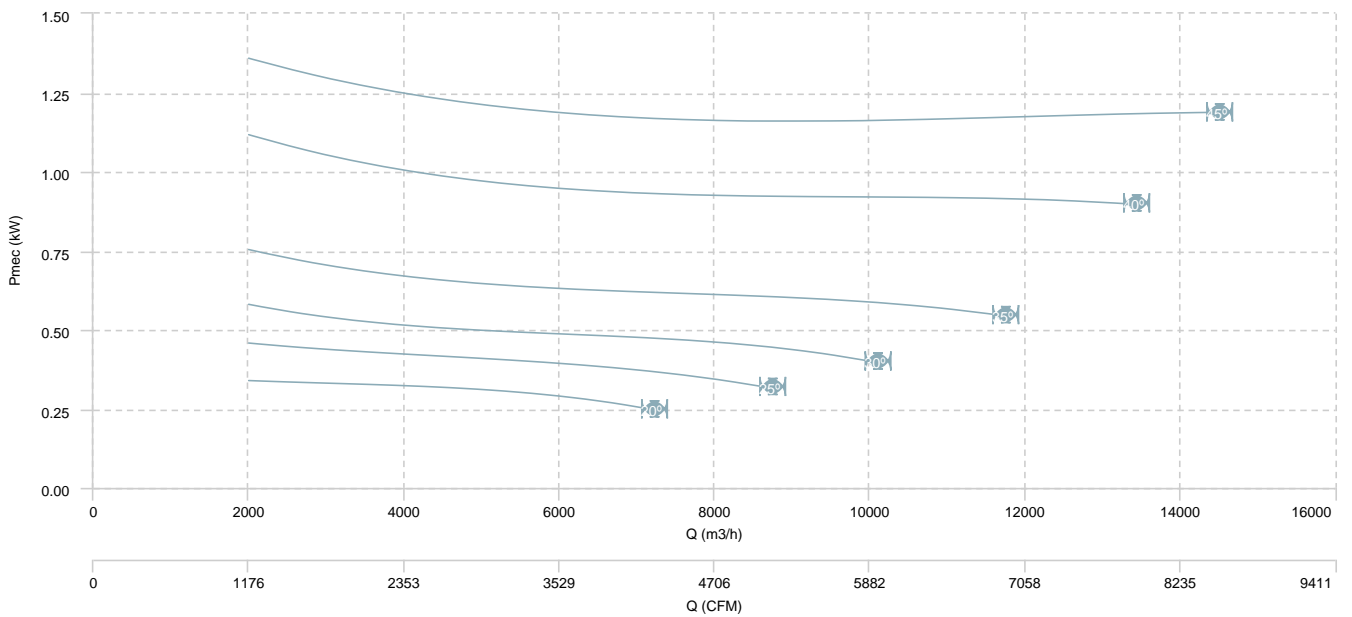


HBF 56 T4 (A5:6) F400

AIR FLOW - PRESSURE

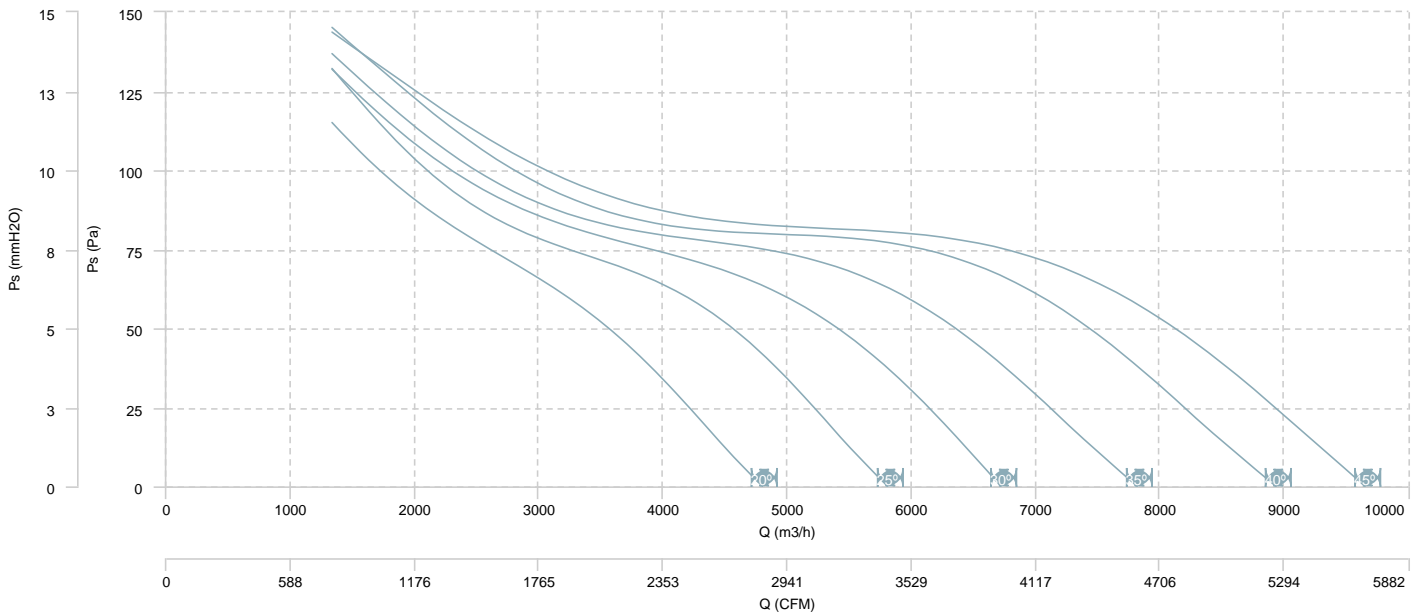


AIR FLOW - MECHANICAL POWER

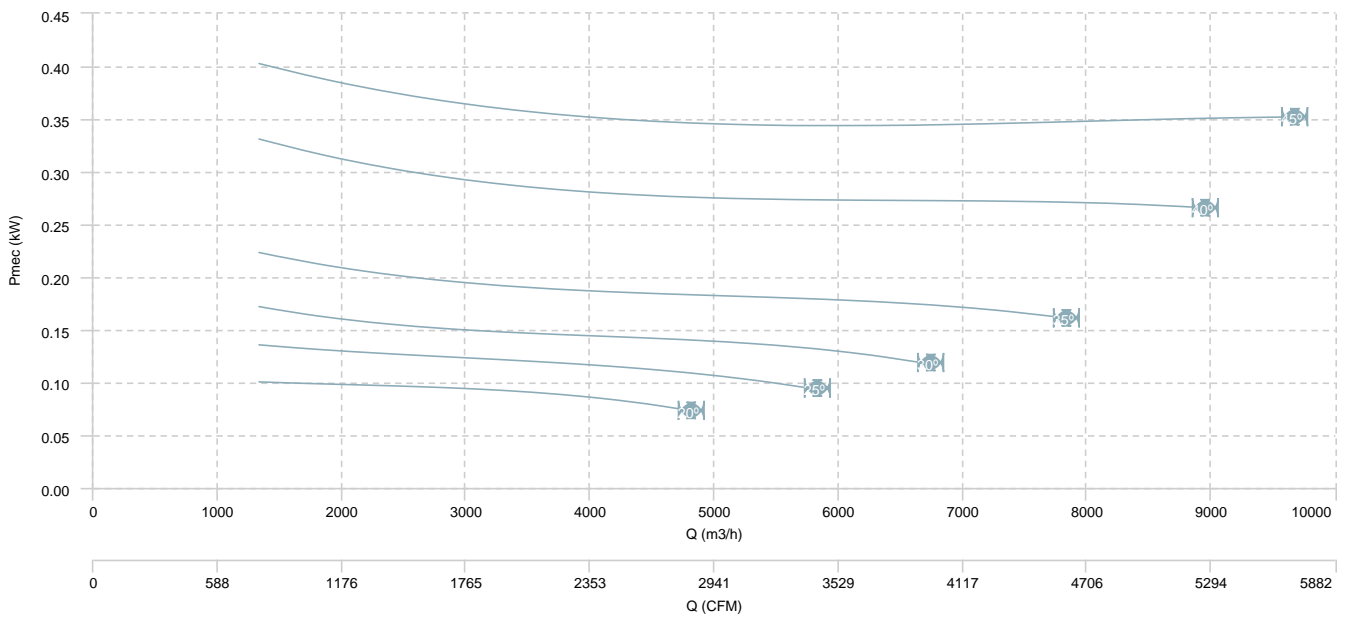


HBF 56 T6 (A5:6) F400

**AIR FLOW - PRESSURE**

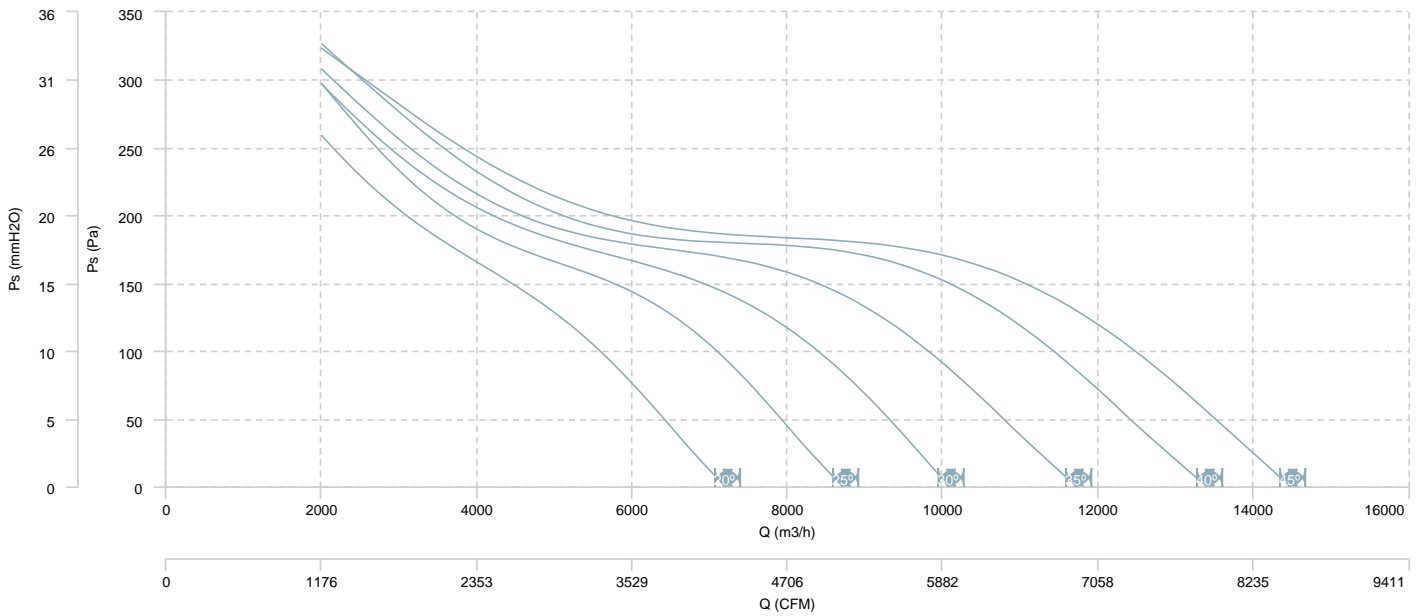


**AIR FLOW - MECHANICAL POWER**

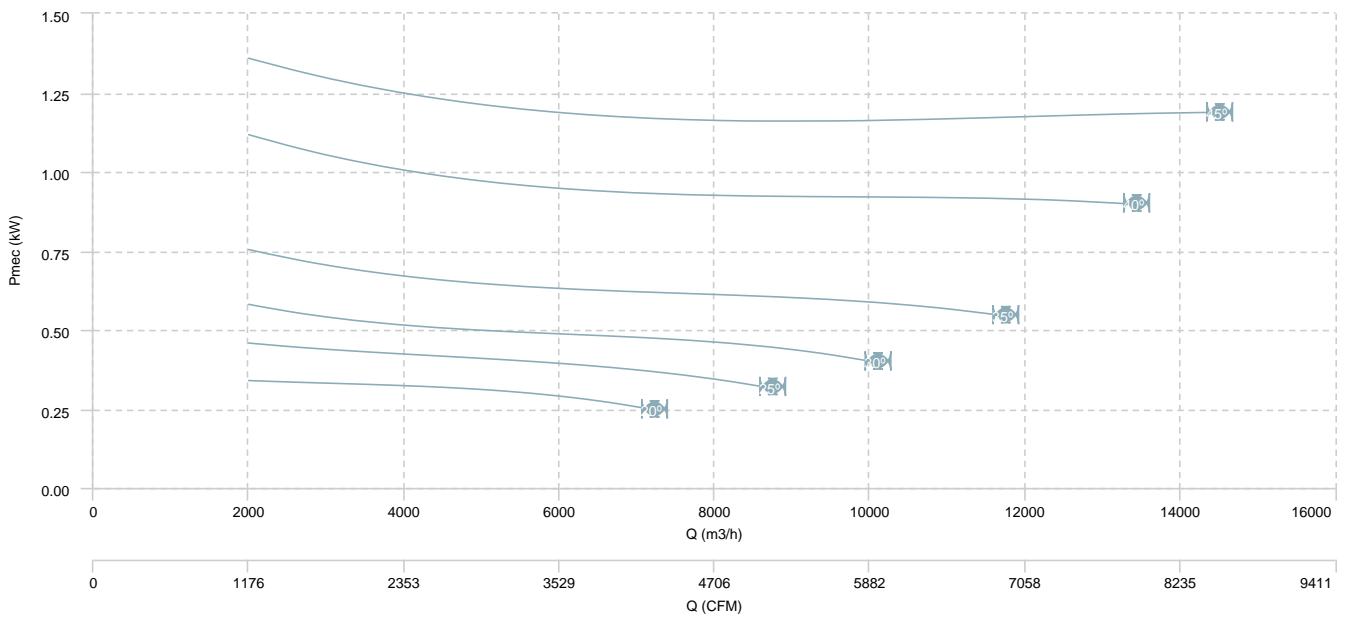


HBF 56 T4/T8 (A5:6) F400

AIR FLOW - PRESSURE (4 poles)

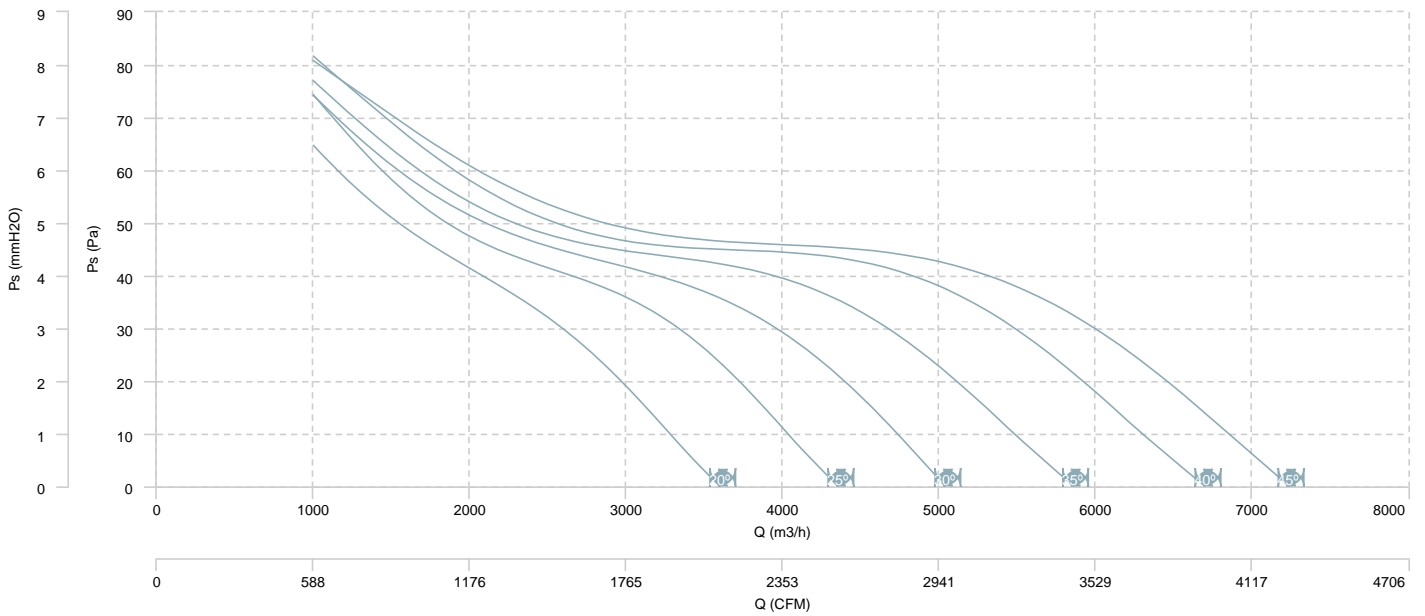


AIR FLOW - MECHANICAL POWER (4 poles)

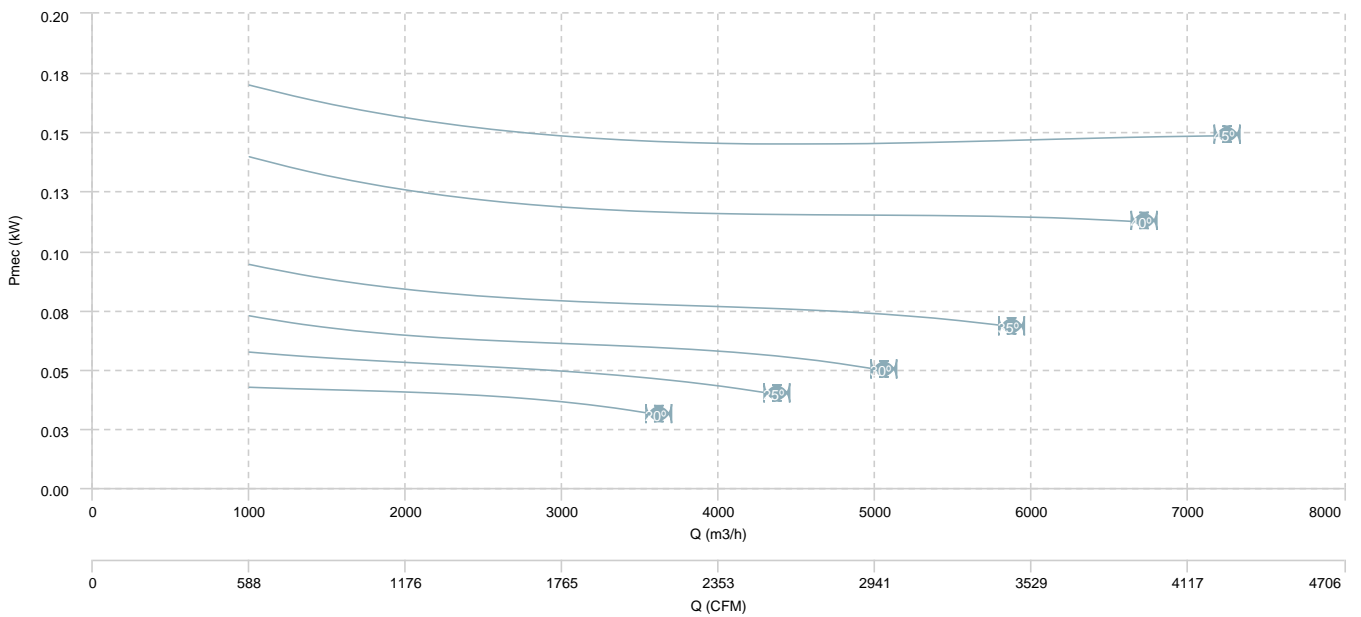


HBF 56 T4/T8 (A5:6) F400

AIR FLOW - PRESSURE (8 poles)

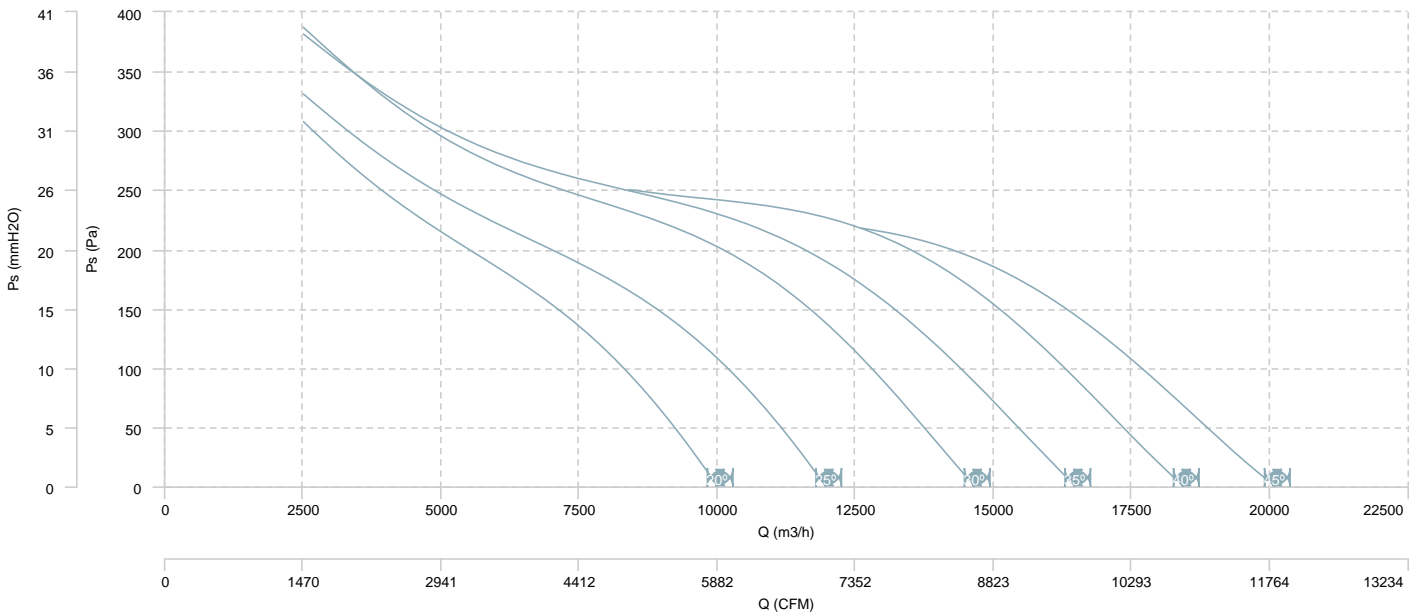


AIR FLOW - MECHANICAL POWER (8 poles)

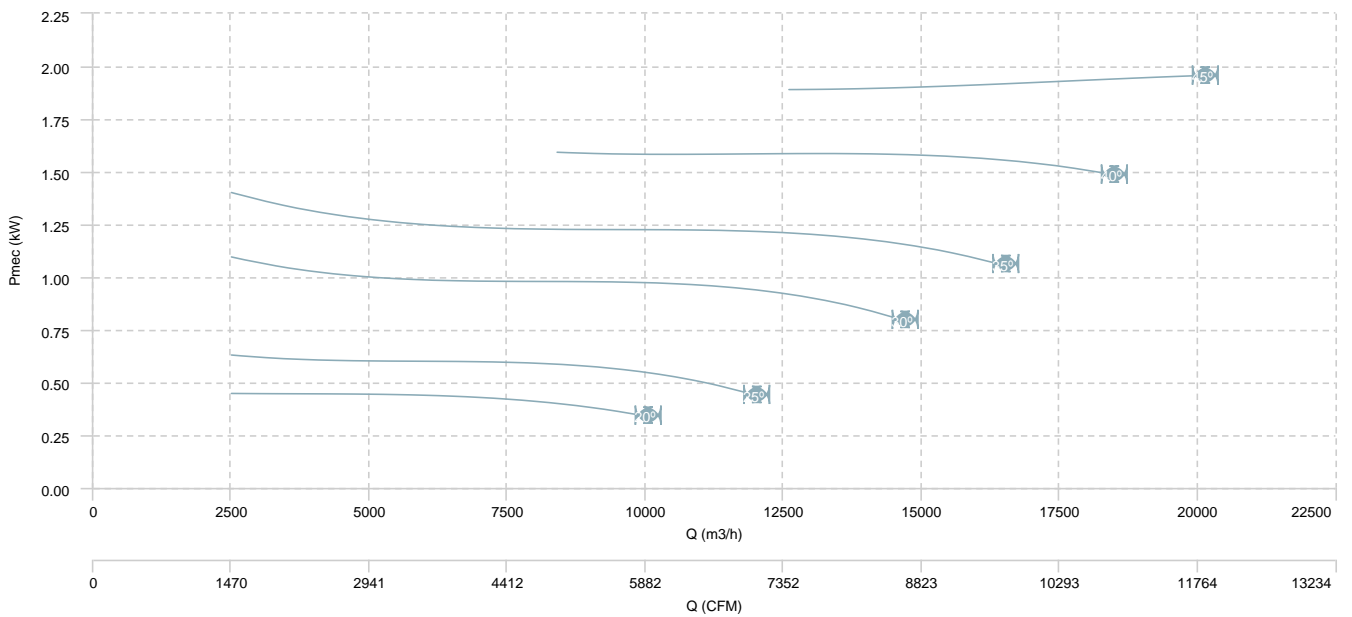


HBF 63 T4 (A5:6) F400

AIR FLOW - PRESSURE

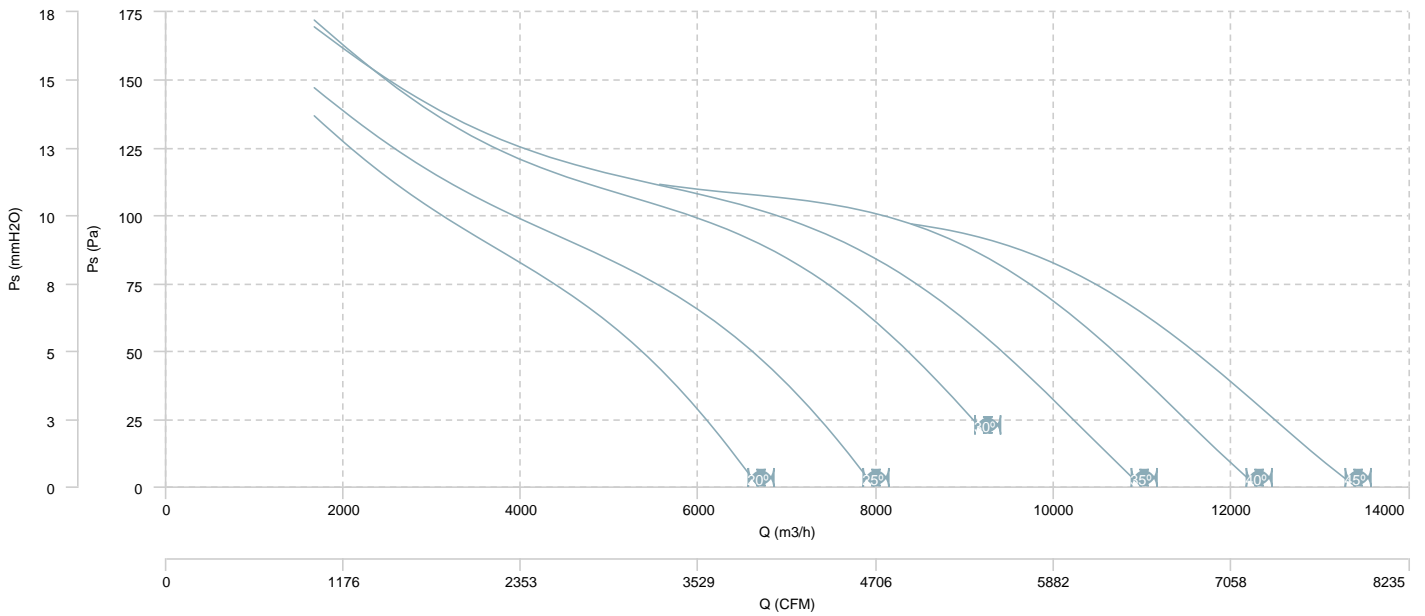


AIR FLOW - MECHANICAL POWER

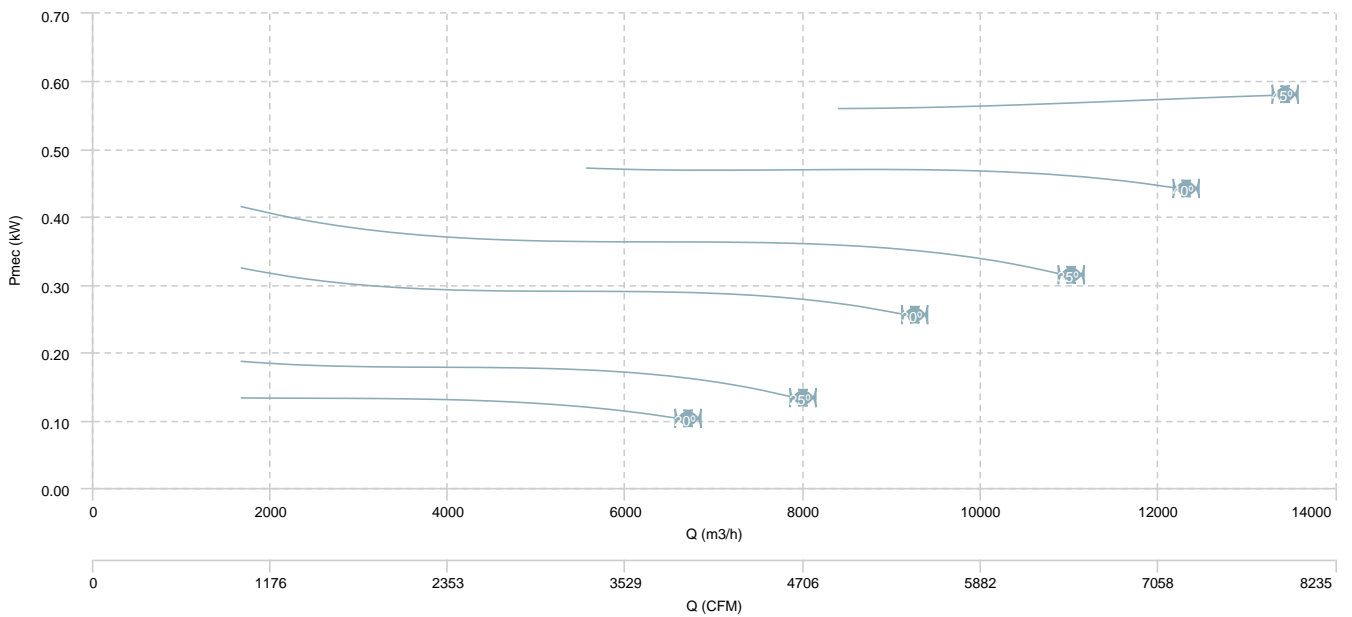


HBF 63 T6 (A5:6) F400

**AIR FLOW - PRESSURE**

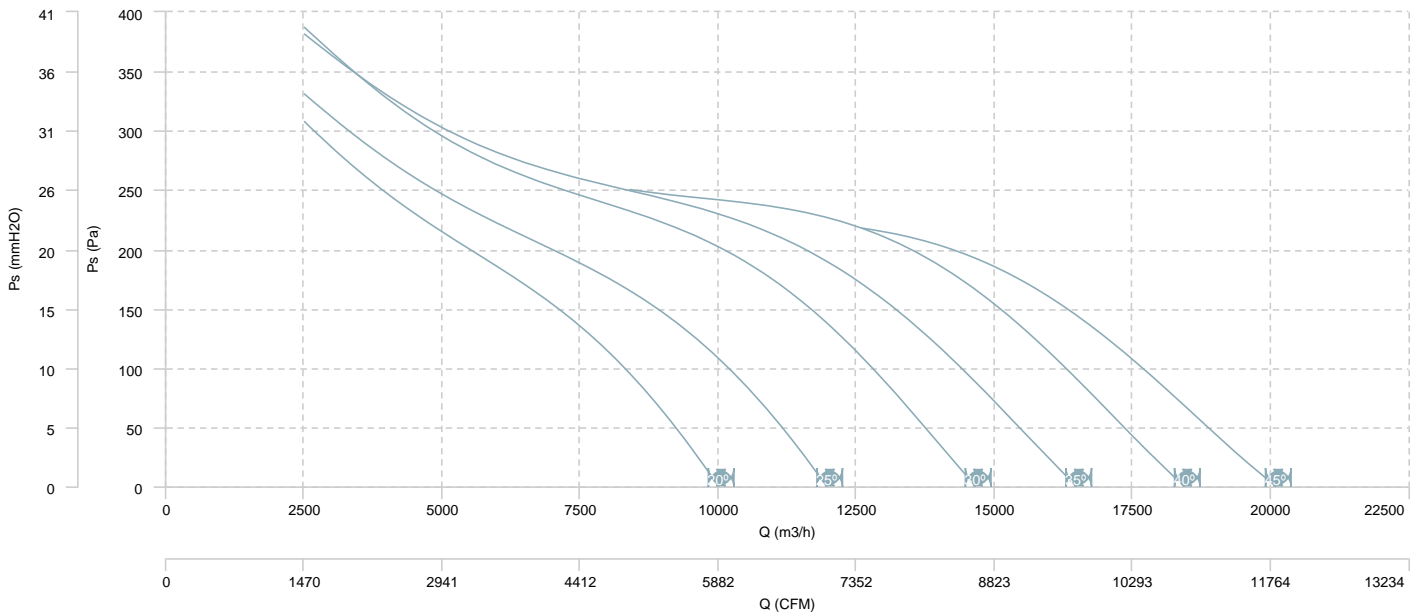


**AIR FLOW - MECHANICAL POWER**

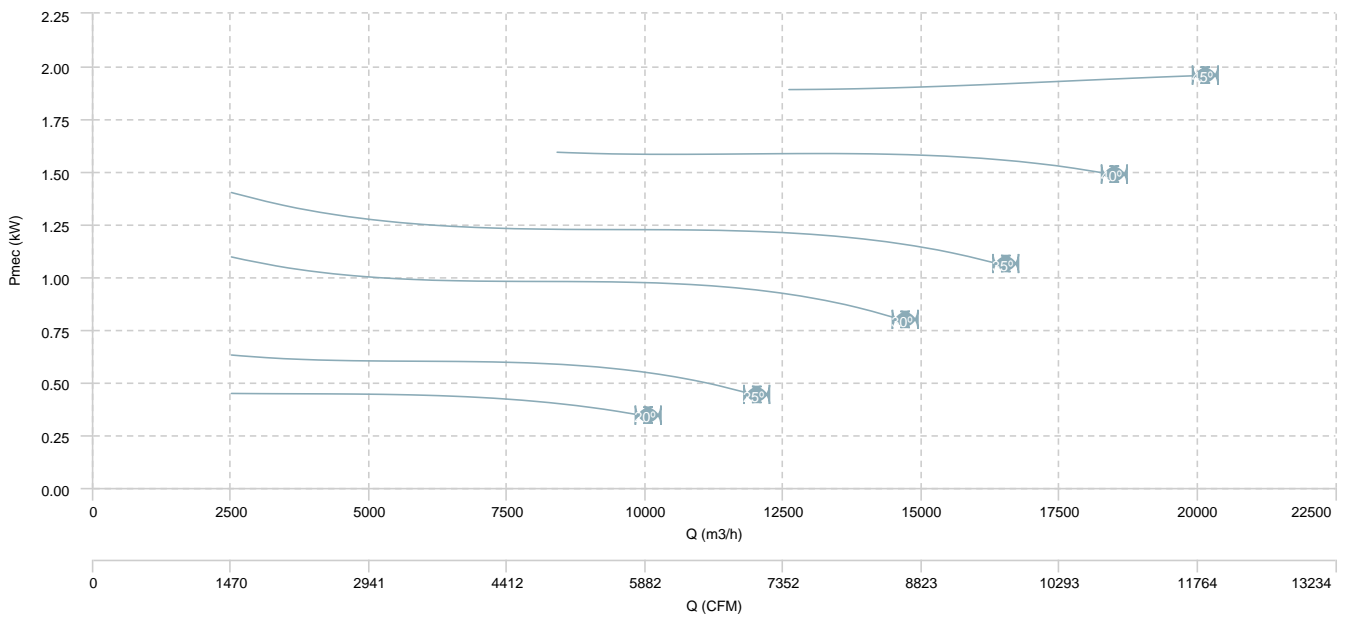


HBF 63 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (4 poles)**

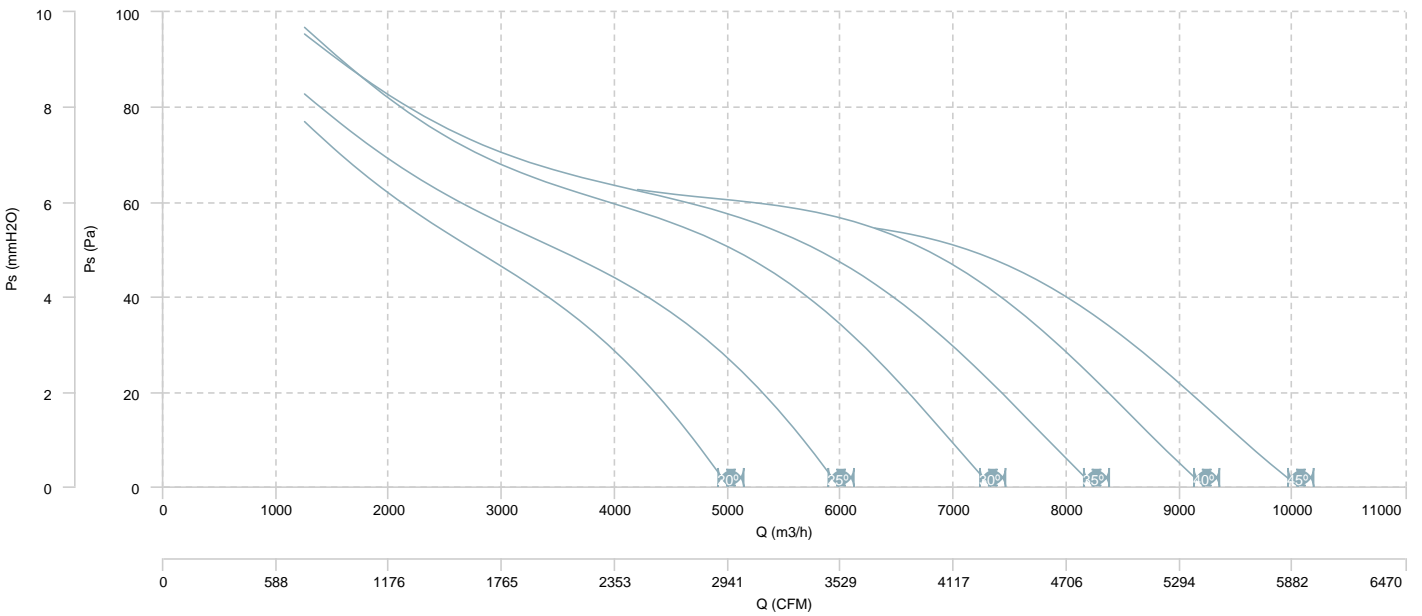


**AIR FLOW - MECHANICAL POWER (4 poles)**

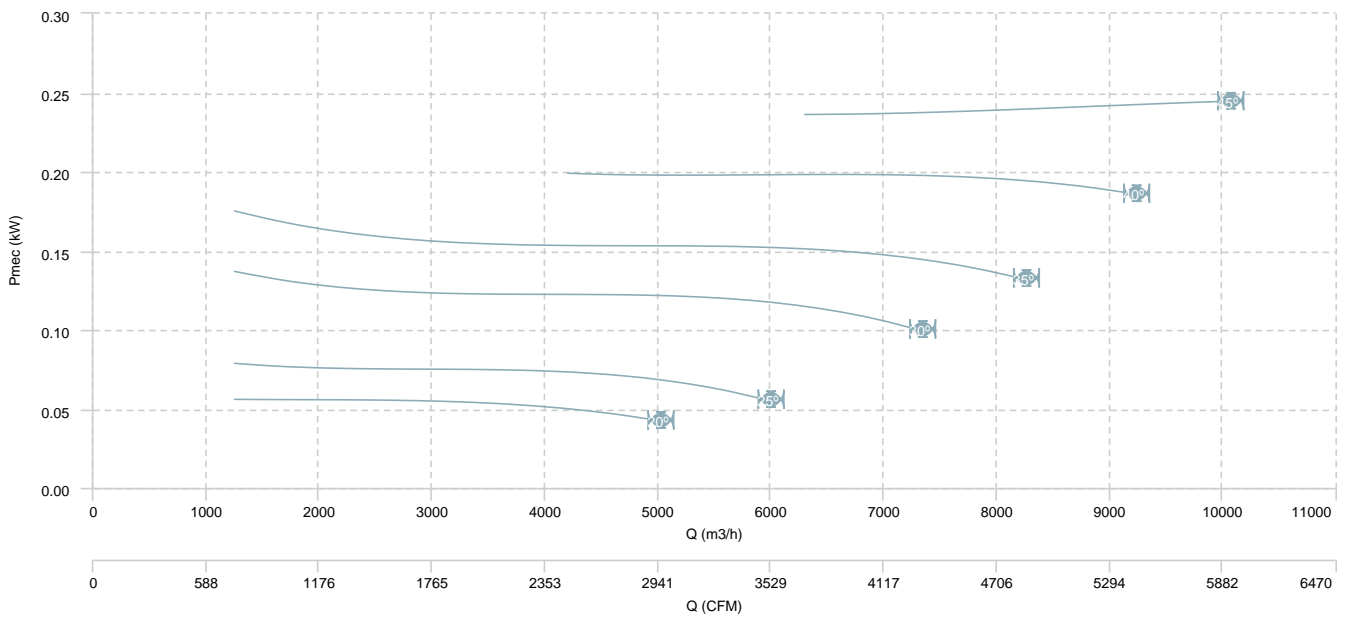


HBF 63 T4/T8 (A5:6) F400

AIR FLOW - PRESSURE (8 poles)



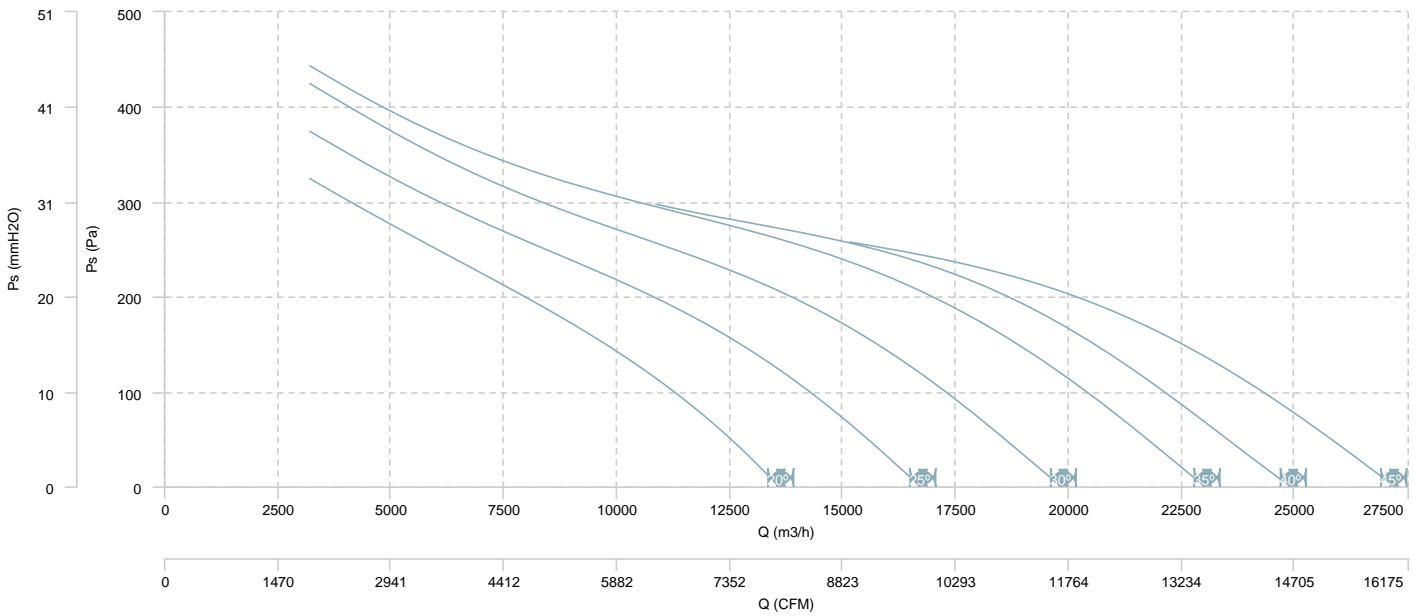
AIR FLOW - MECHANICAL POWER (8 poles)



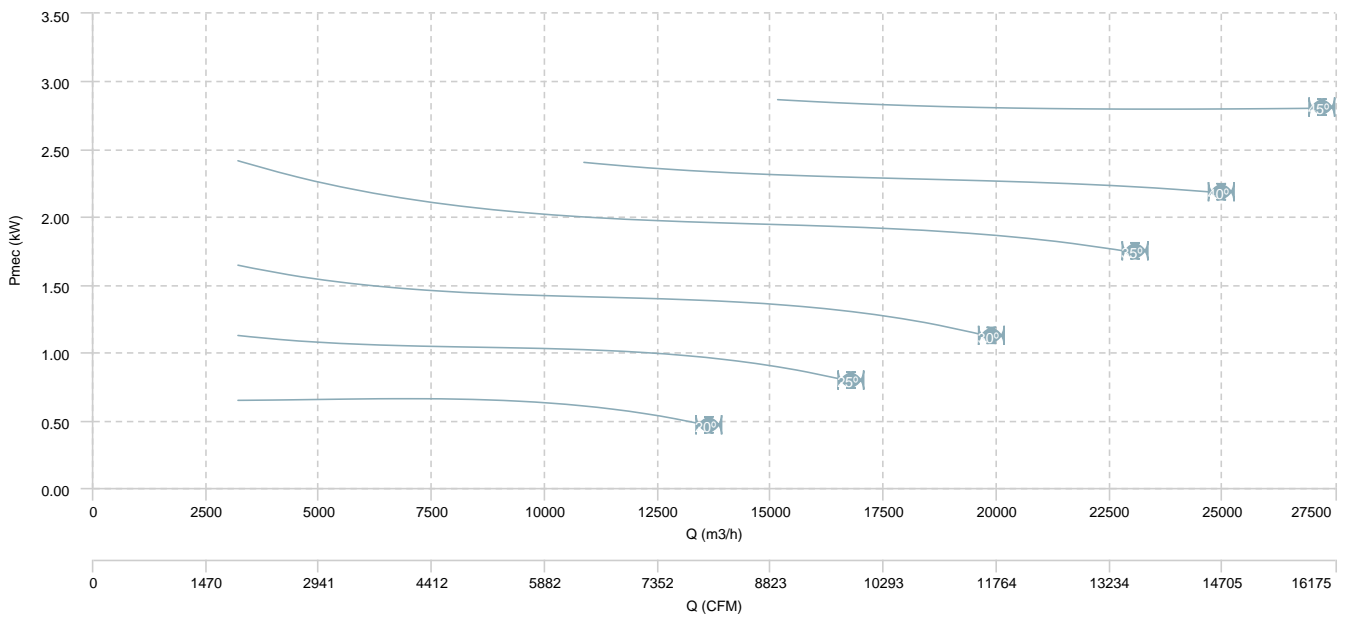


HBF 71 T4 (A5:6) F400

**AIR FLOW - PRESSURE**

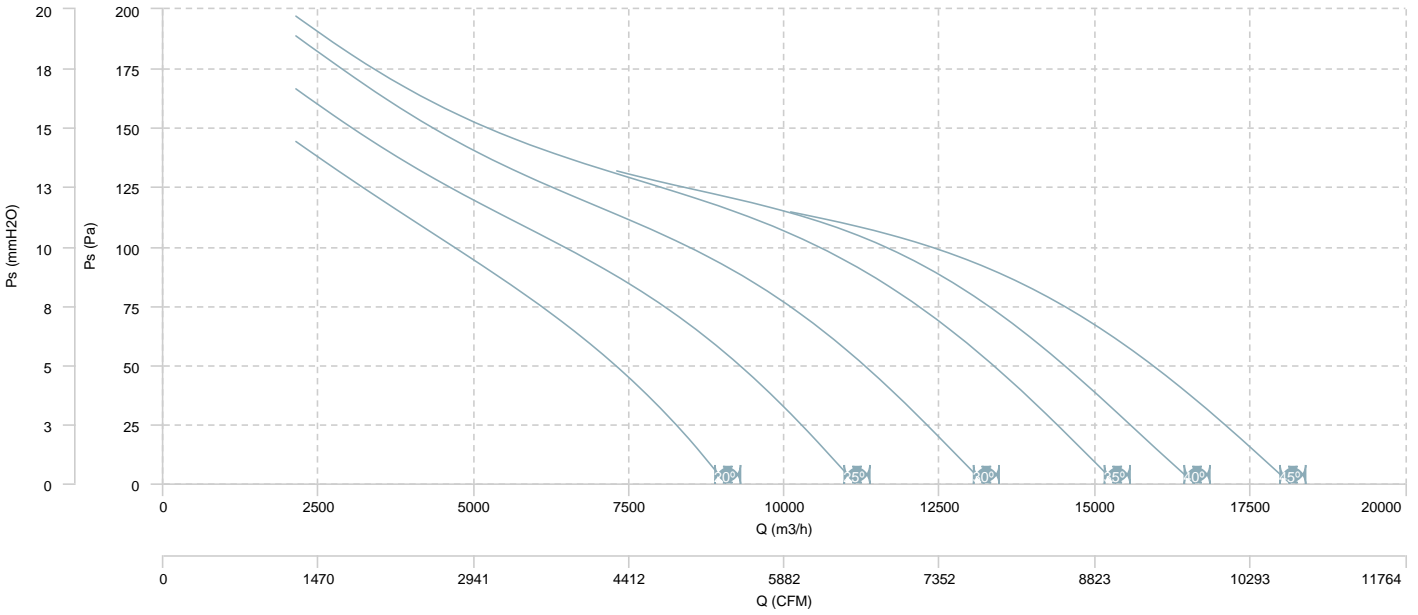


**AIR FLOW - MECHANICAL POWER**

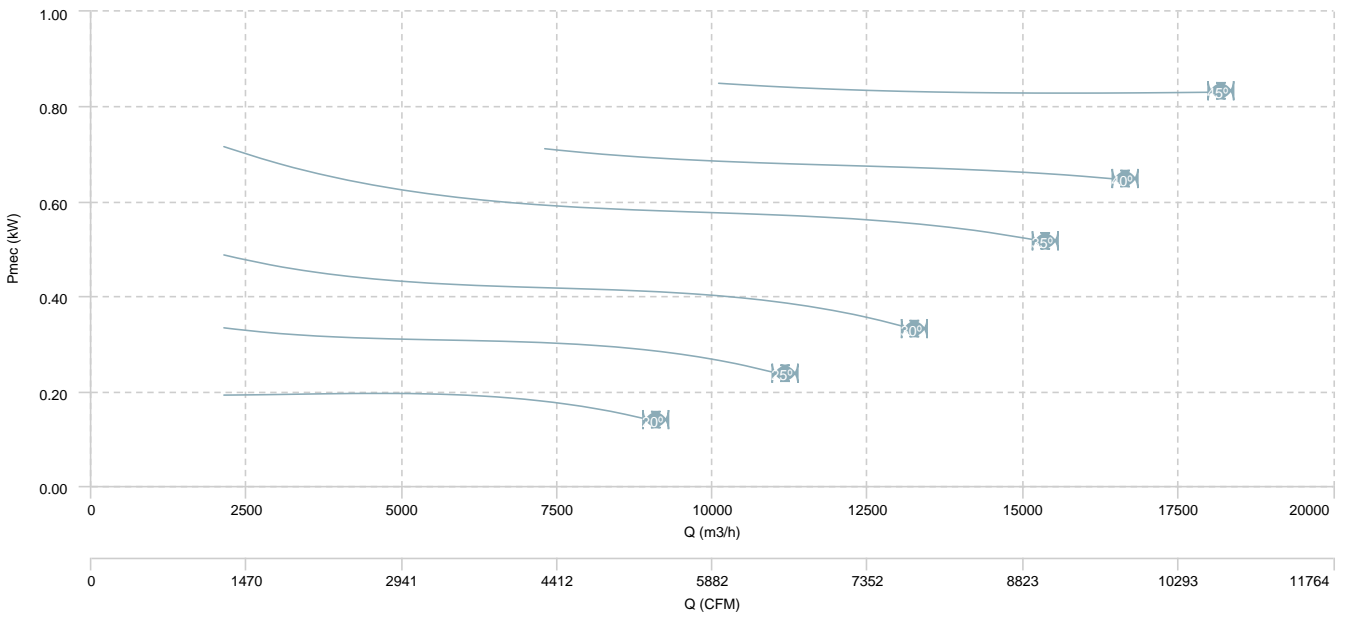


HBF 71 T6 (A5:6) F400

**AIR FLOW - PRESSURE**

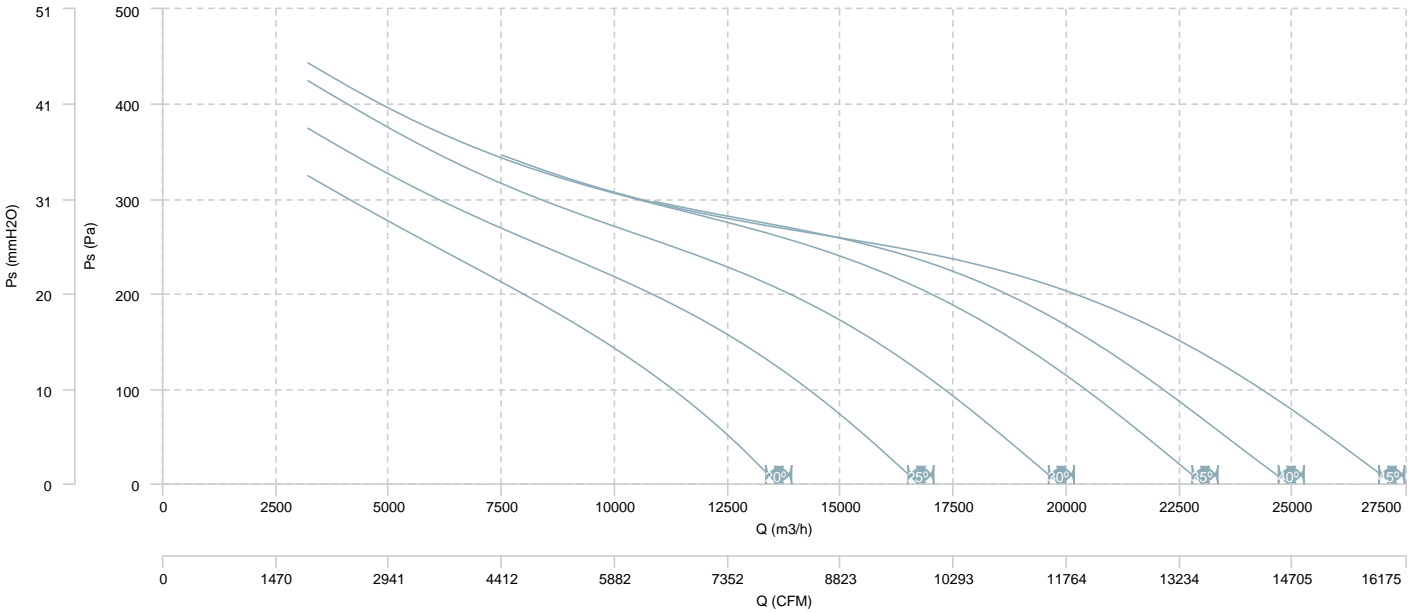


**AIR FLOW - MECHANICAL POWER**

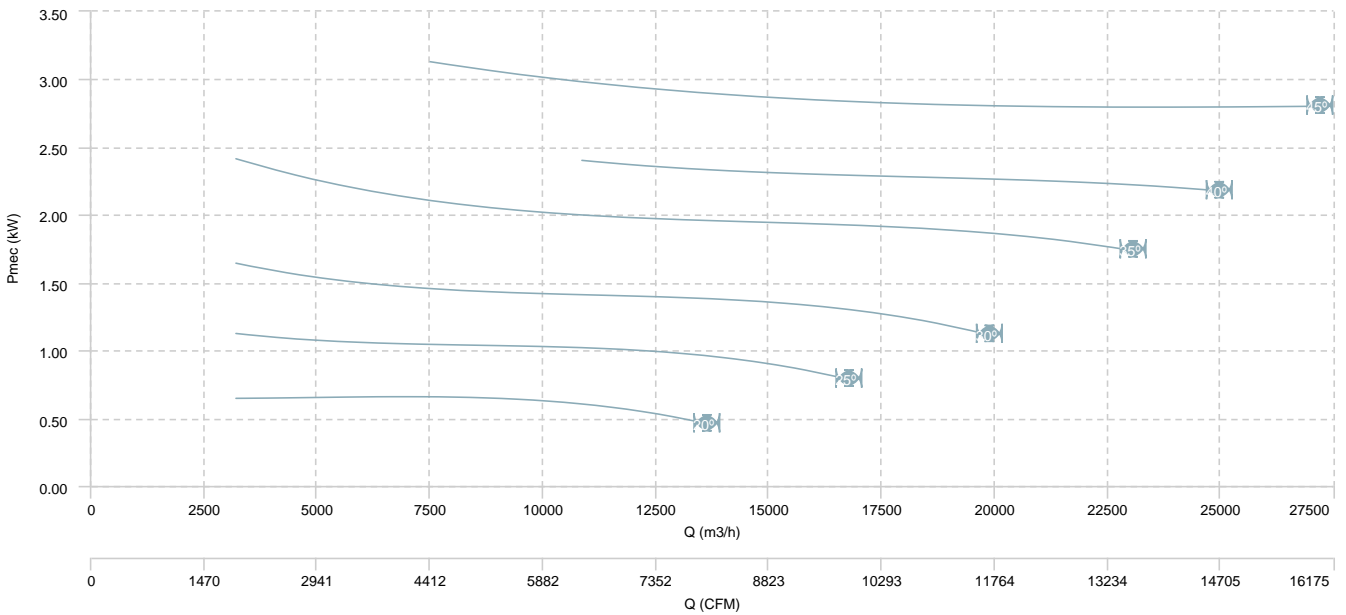


HBF 71 T4/T8 (A5:6) F400

AIR FLOW - PRESSURE (4 poles)

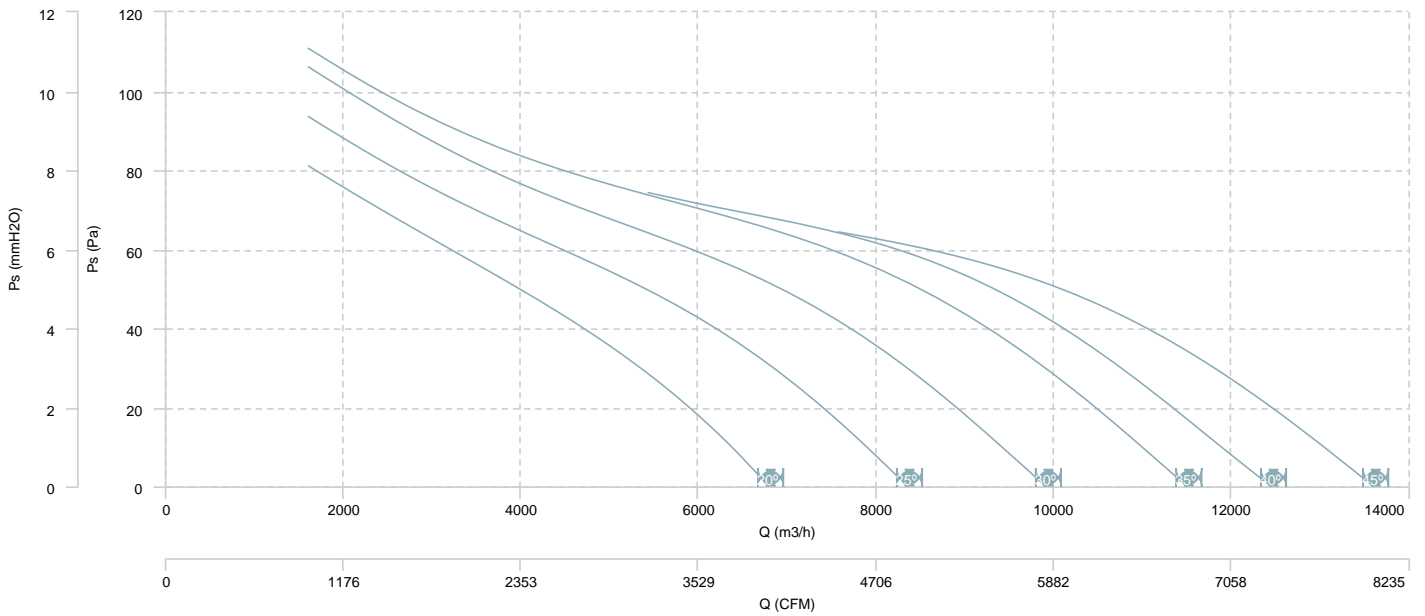


AIR FLOW - MECHANICAL POWER (4 poles)

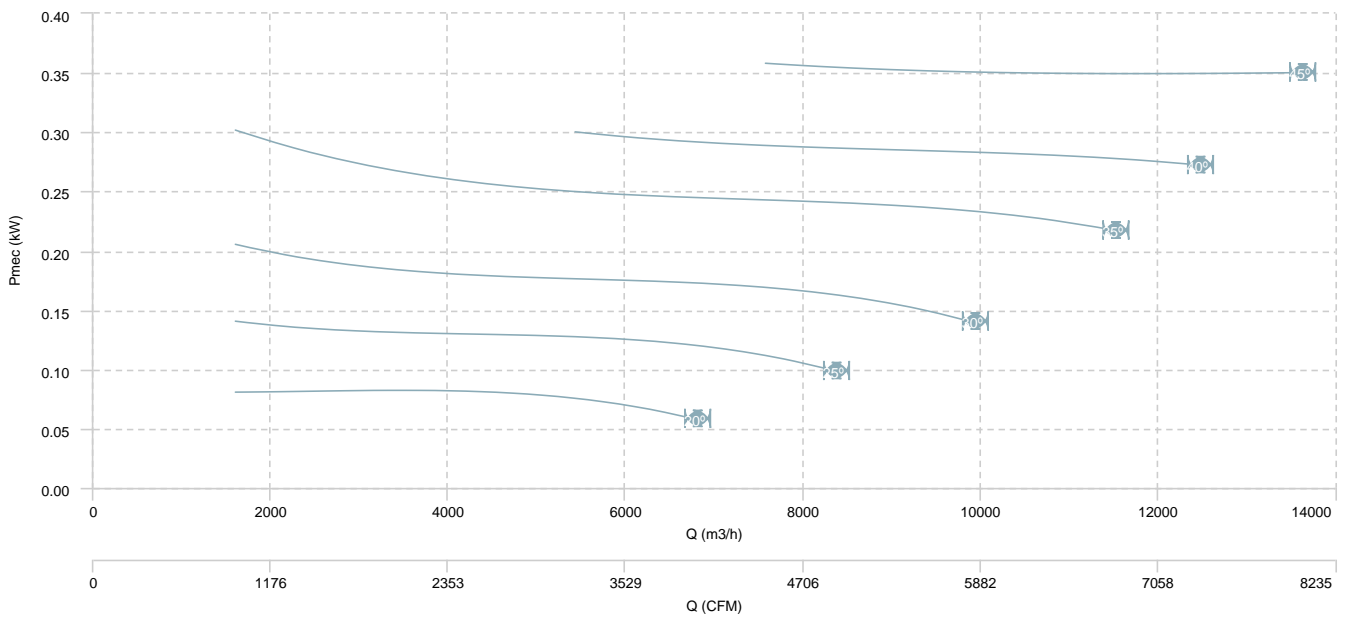


HBF 71 T4/T8 (A5:6) F400

AIR FLOW - PRESSURE (8 poles)

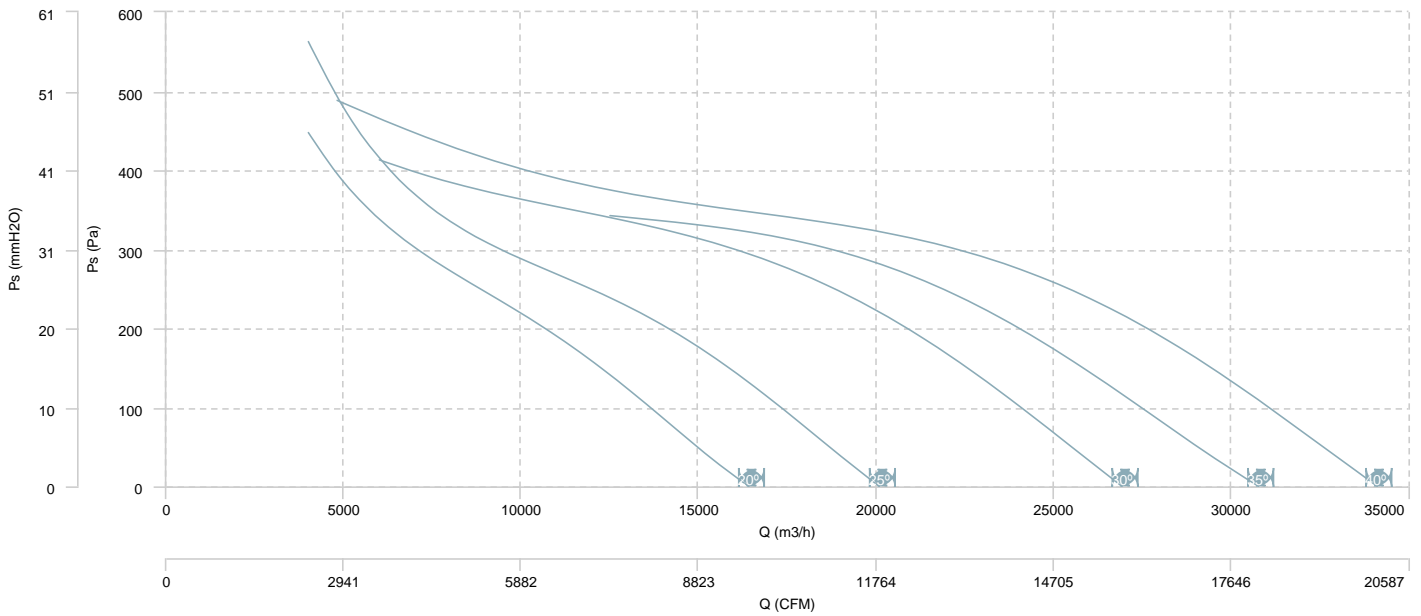


AIR FLOW - MECHANICAL POWER (8 poles)

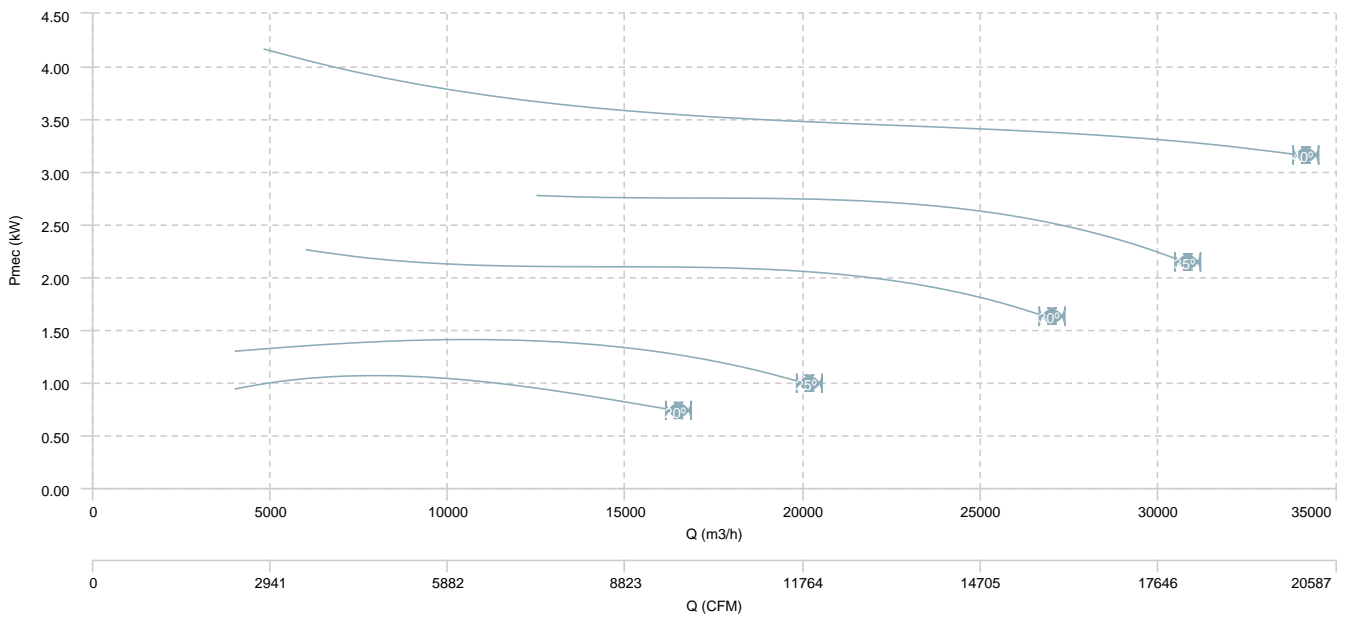


HBF 80 T4 (A5:6) F400

**AIR FLOW - PRESSURE**

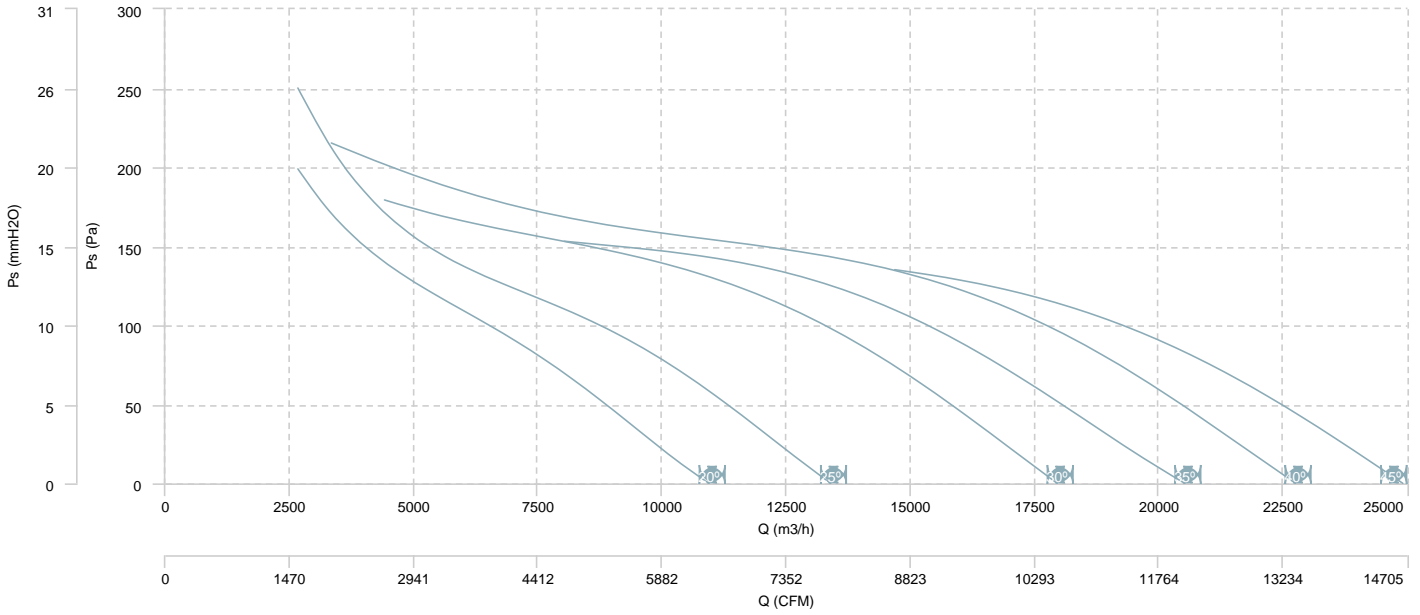


**AIR FLOW - MECHANICAL POWER**

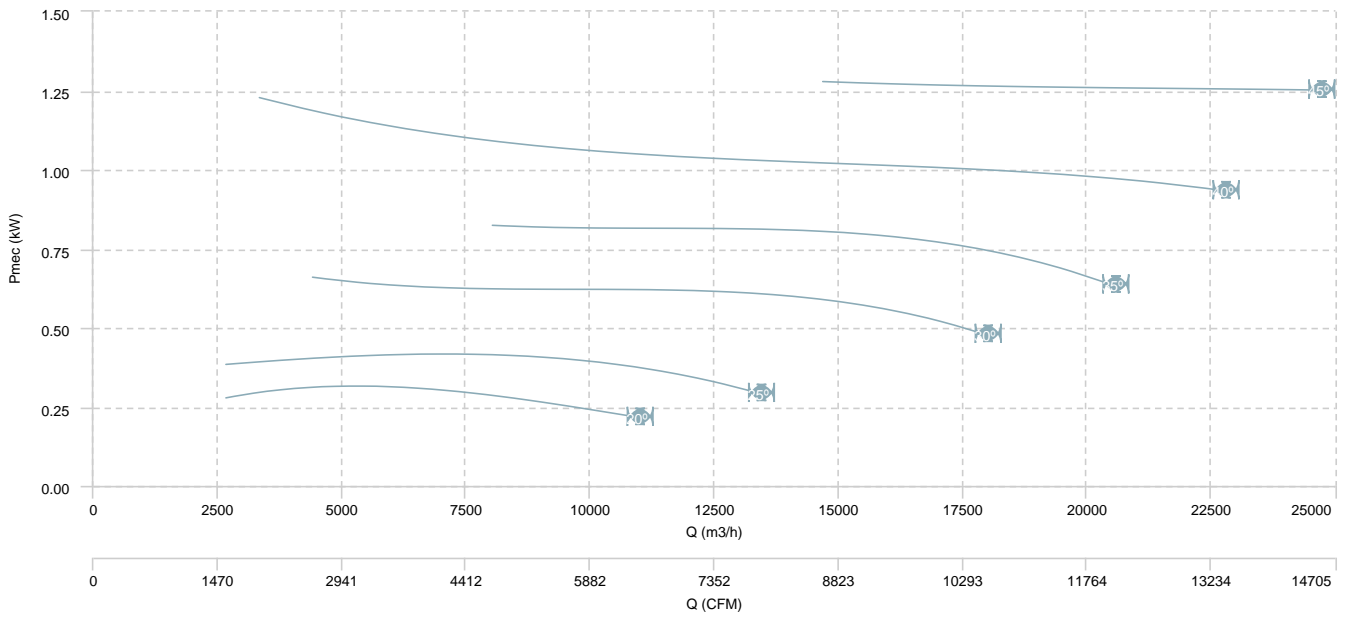


HBF 80 T6 (A5:6) F400

AIR FLOW - PRESSURE

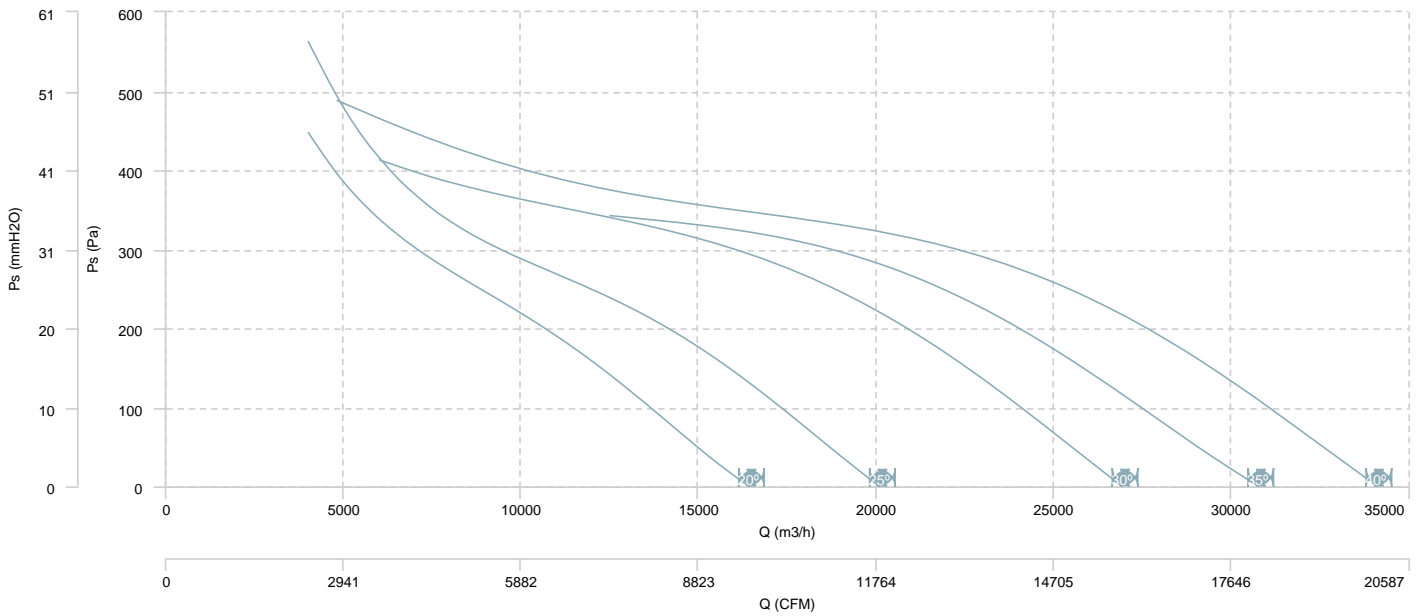


AIR FLOW - MECHANICAL POWER

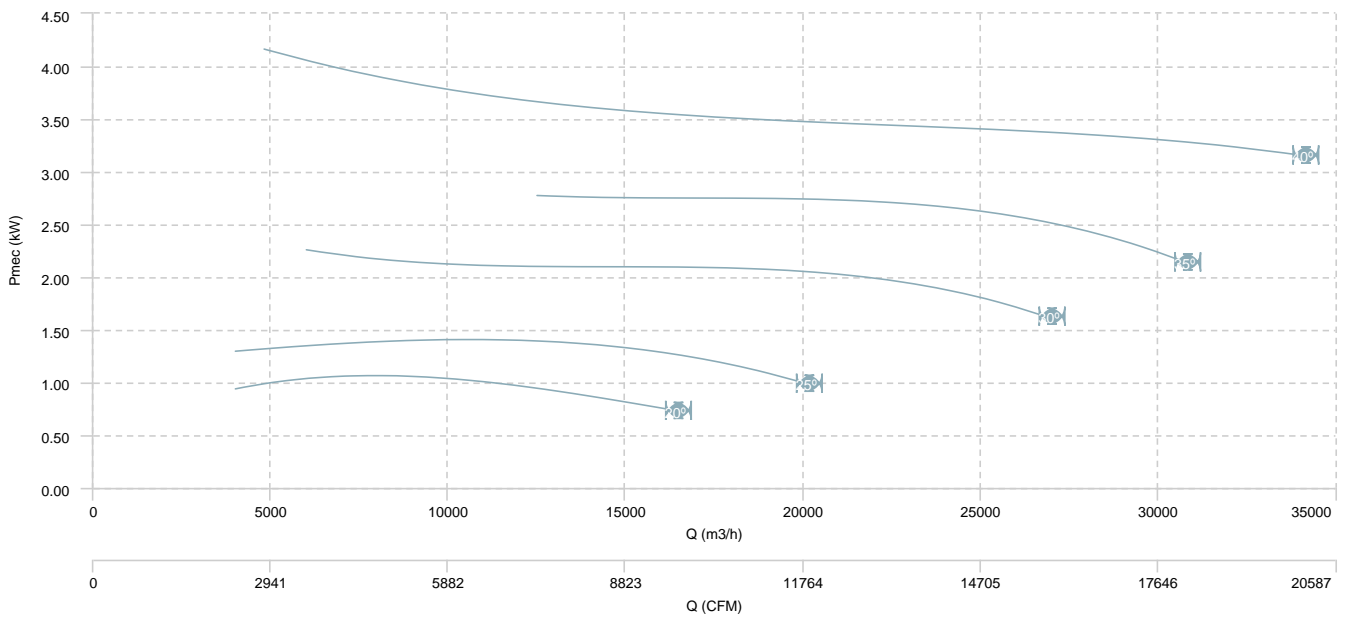


HBF 80 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (4 poles)**

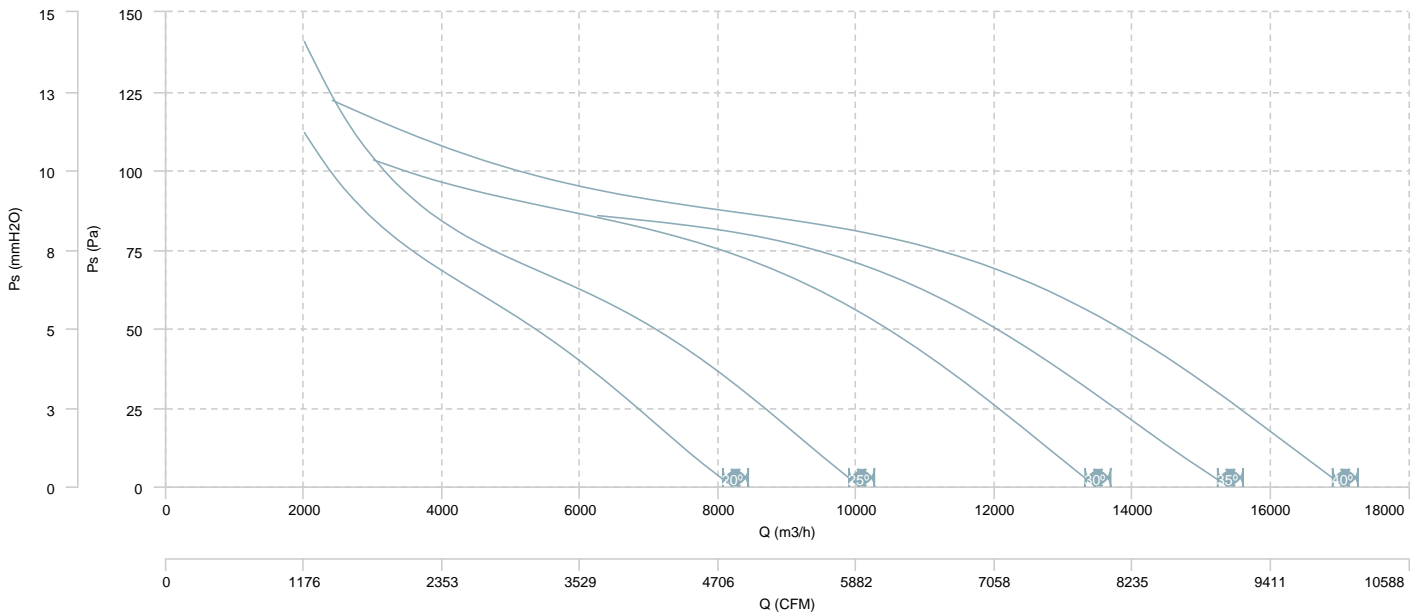


**AIR FLOW - MECHANICAL POWER (4 poles)**

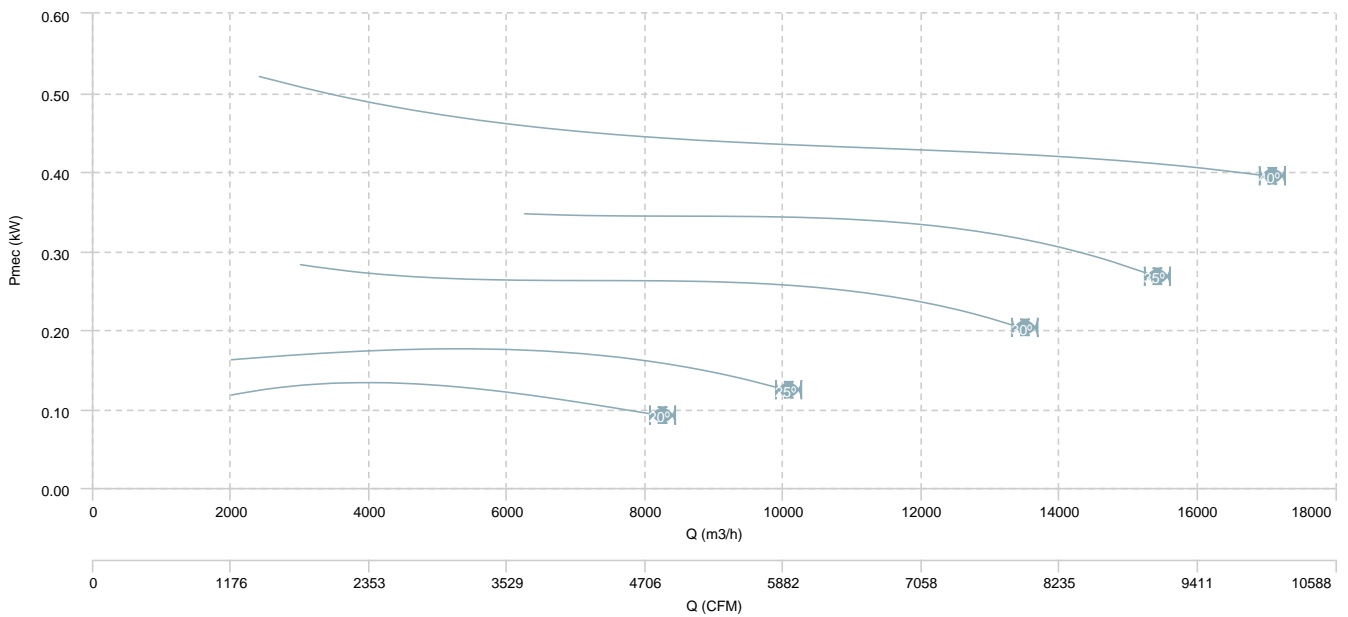


HBF 80 T4/T8 (A5:6) F400

**AIR FLOW - PRESSURE (8 poles)**



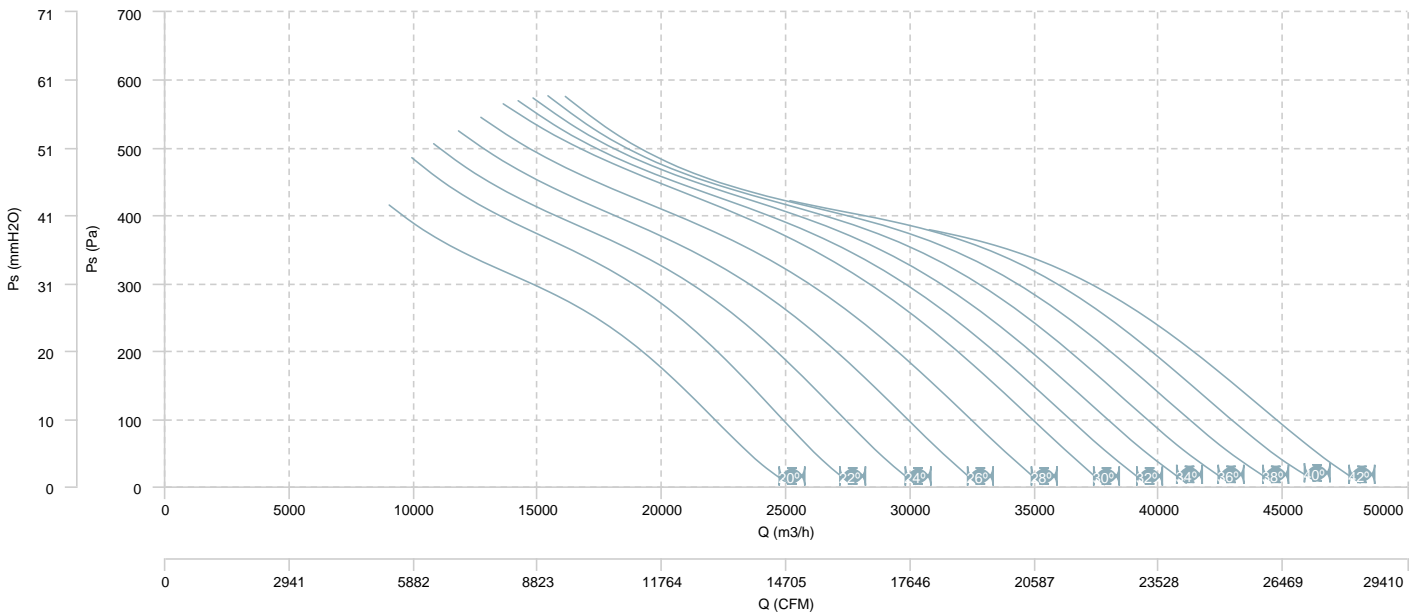
**AIR FLOW - MECHANICAL POWER (8 poles)**



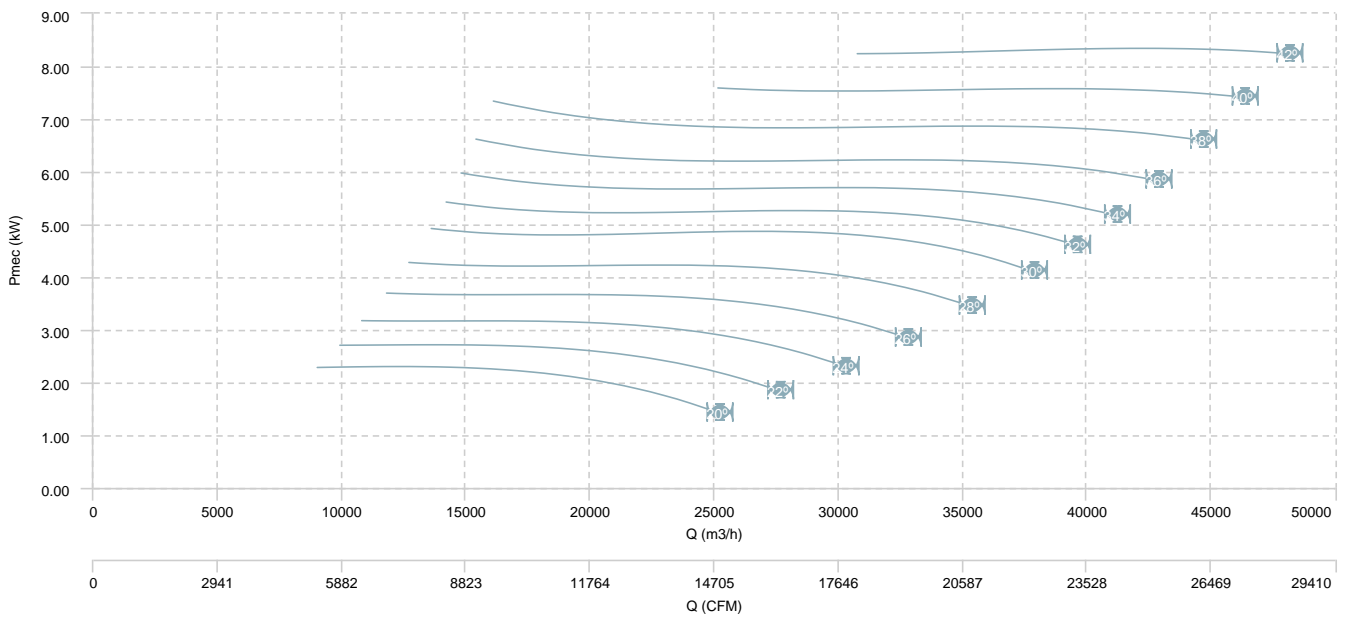


HBF 90 T4 (A3:4) F400

**AIR FLOW - PRESSURE**

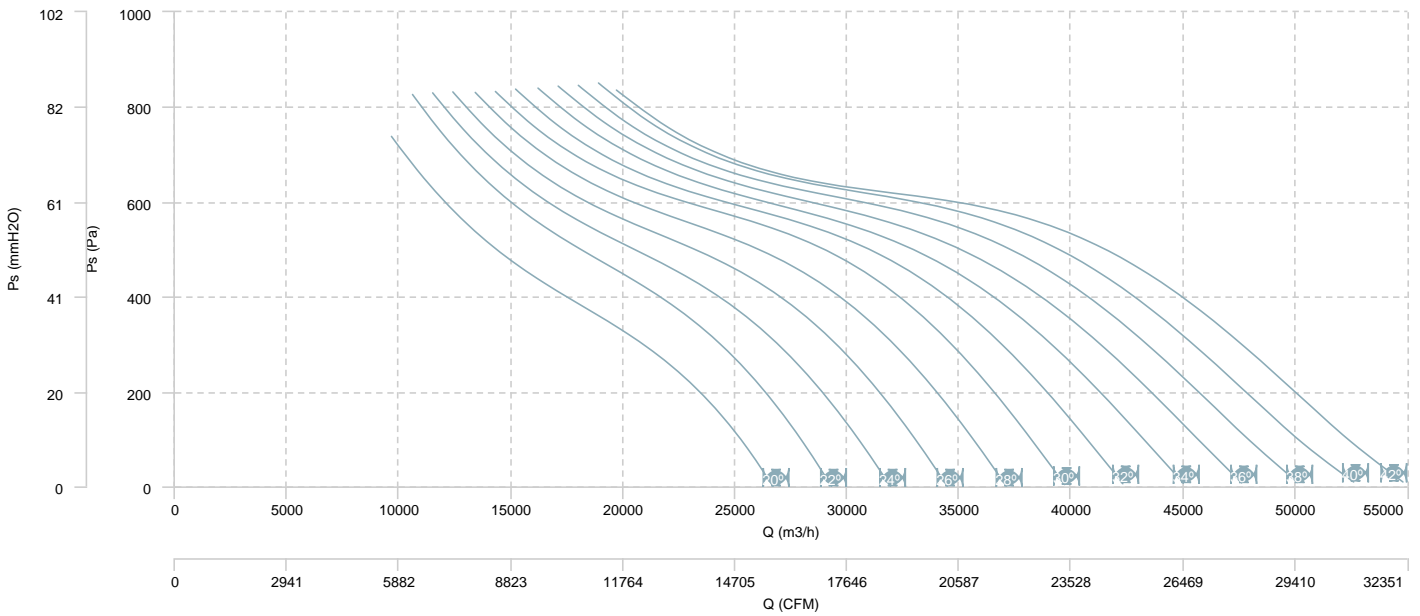


**AIR FLOW - MECHANICAL POWER**

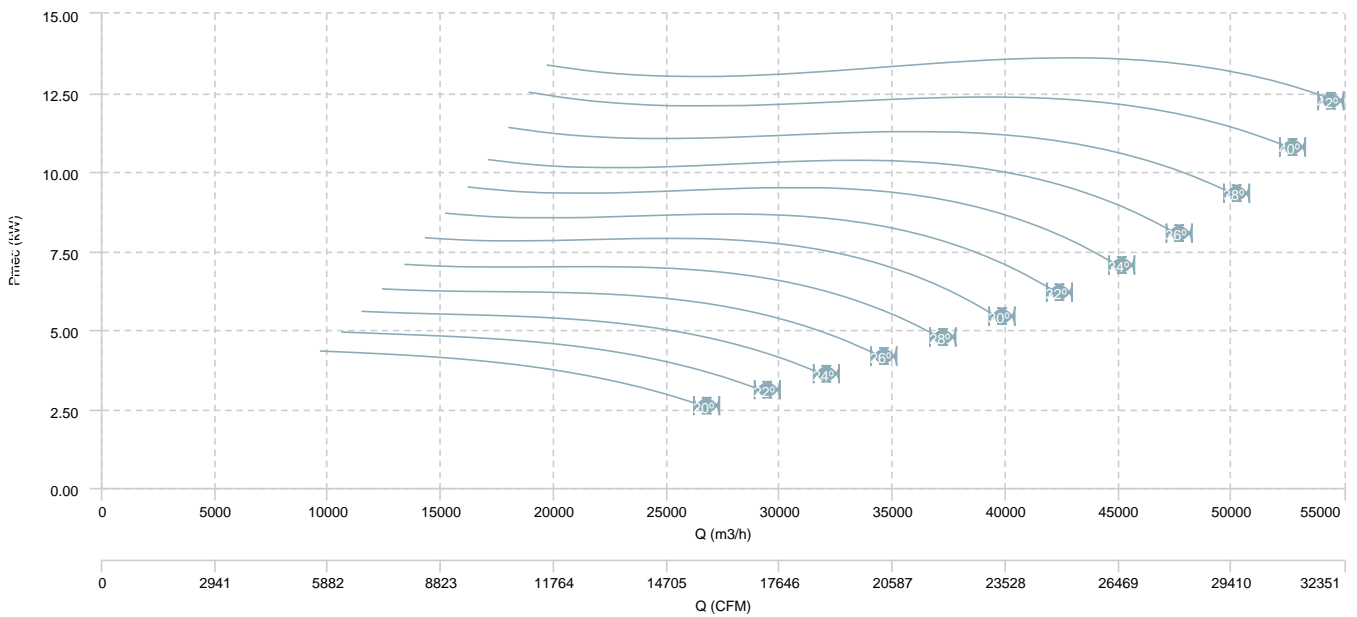


HBF 90 T4 (A3:8) F400

AIR FLOW - PRESSURE

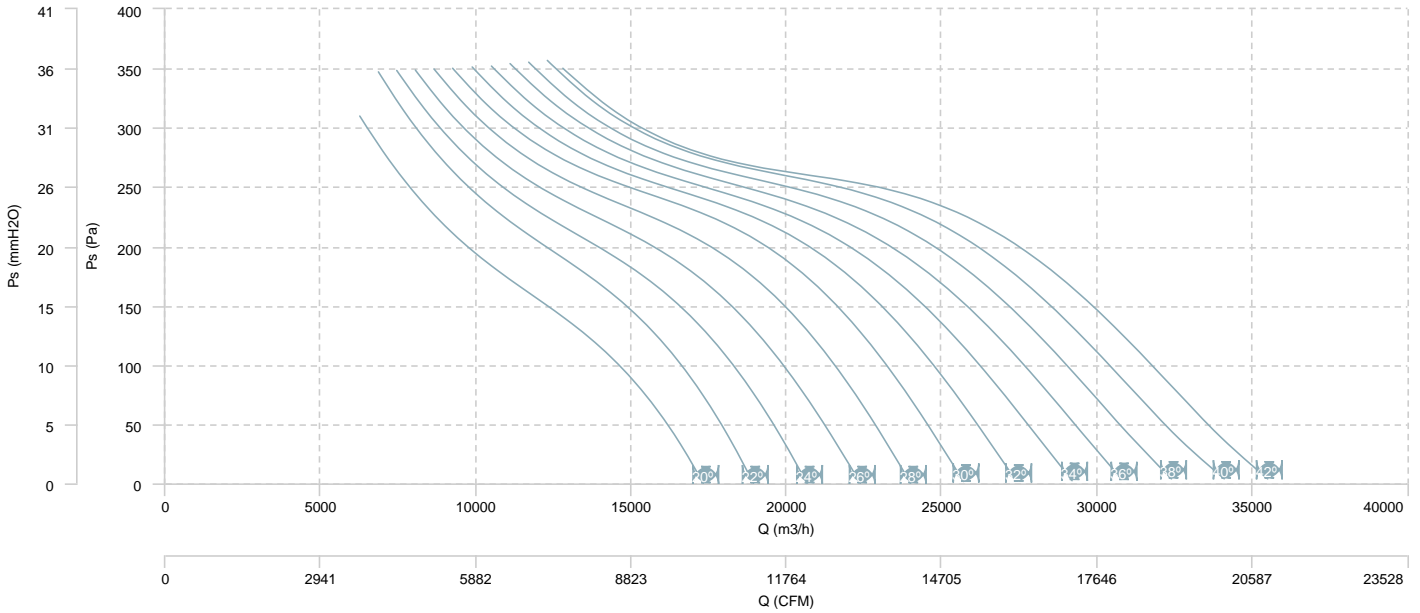


AIR FLOW - MECHANICAL POWER

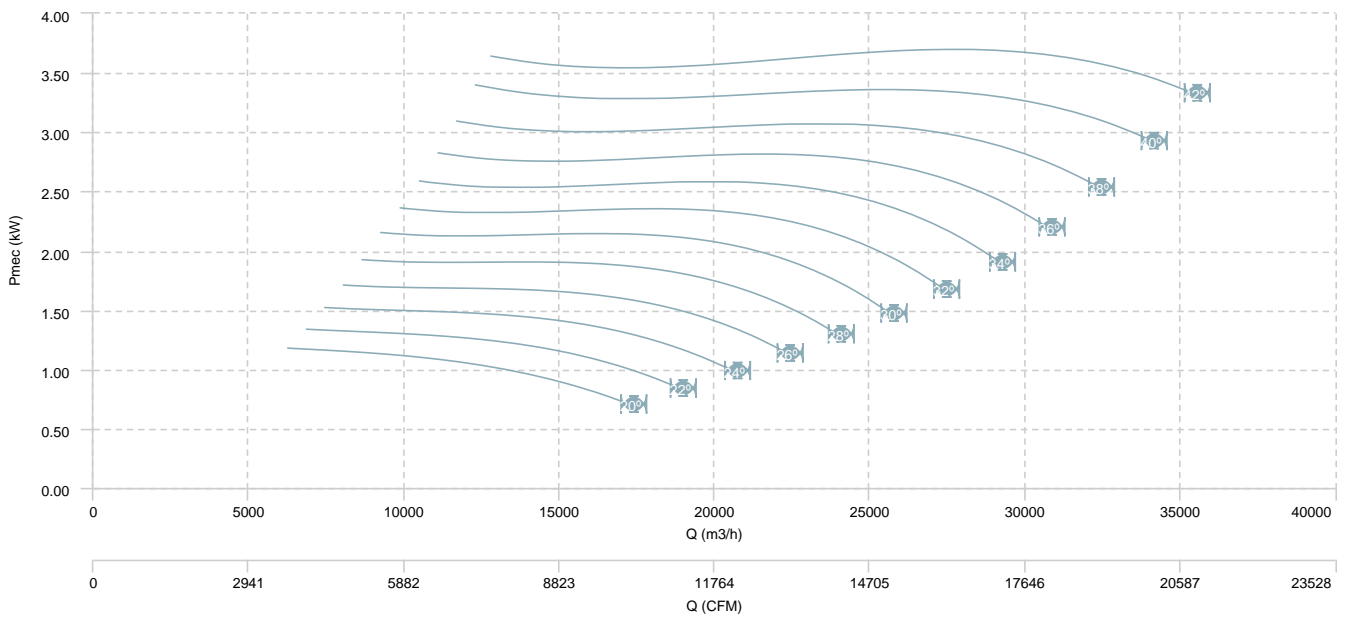


HBF 90 T6 (A3:8) F400

**AIR FLOW - PRESSURE**

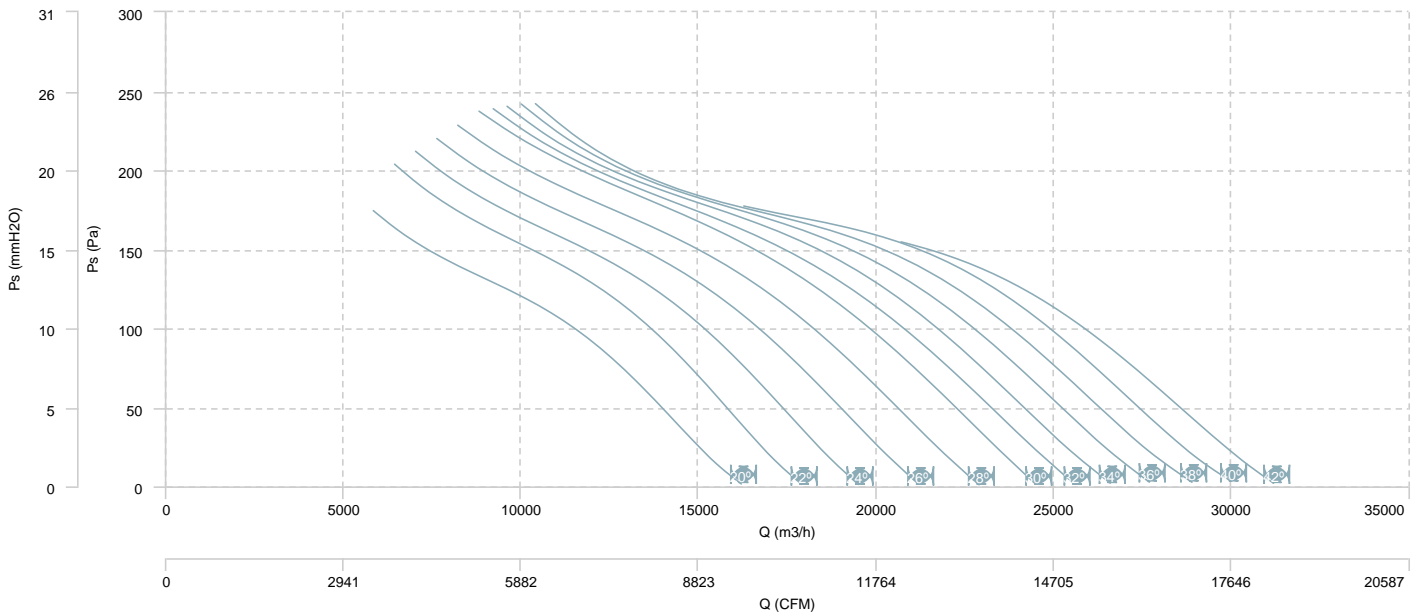


**AIR FLOW - MECHANICAL POWER**

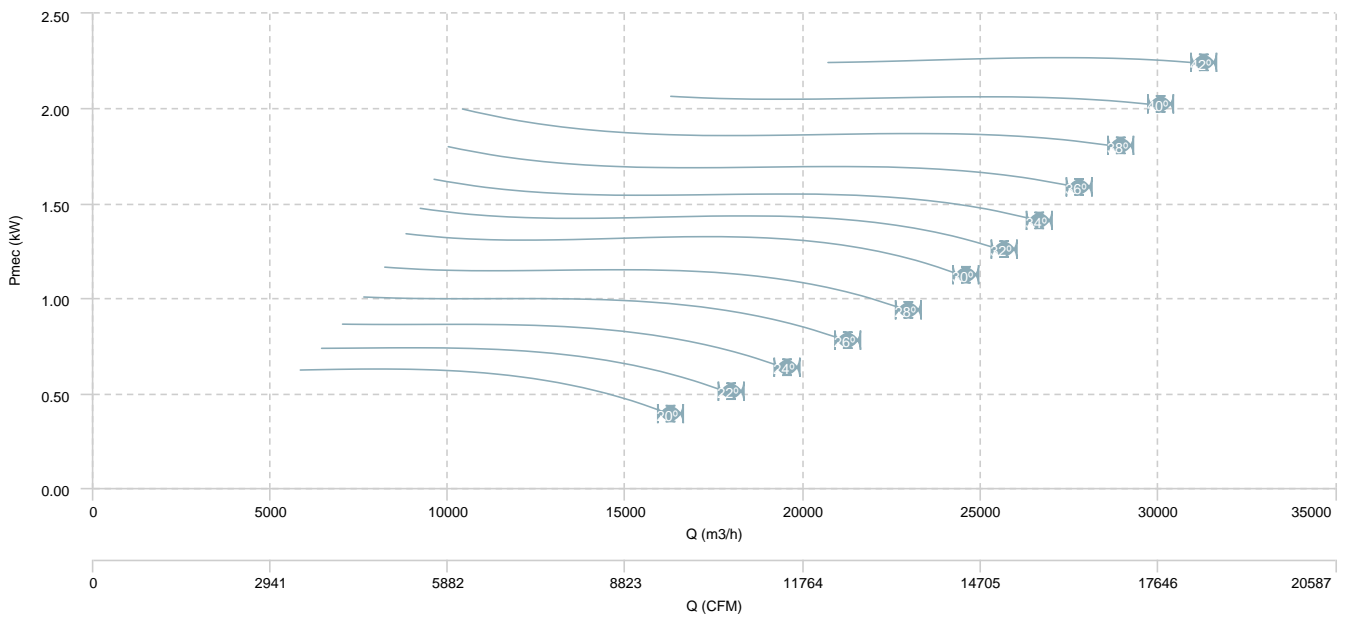


HBF 90 T6 (A3:4) F400

**AIR FLOW - PRESSURE**

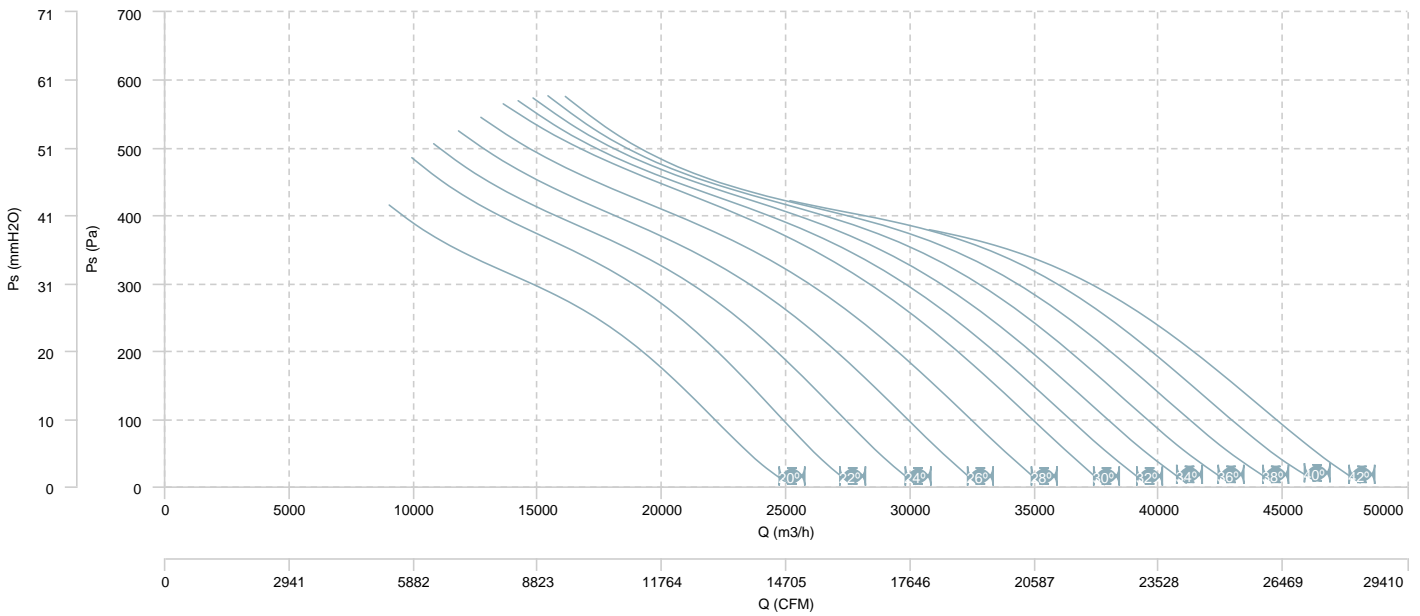


**AIR FLOW - MECHANICAL POWER**

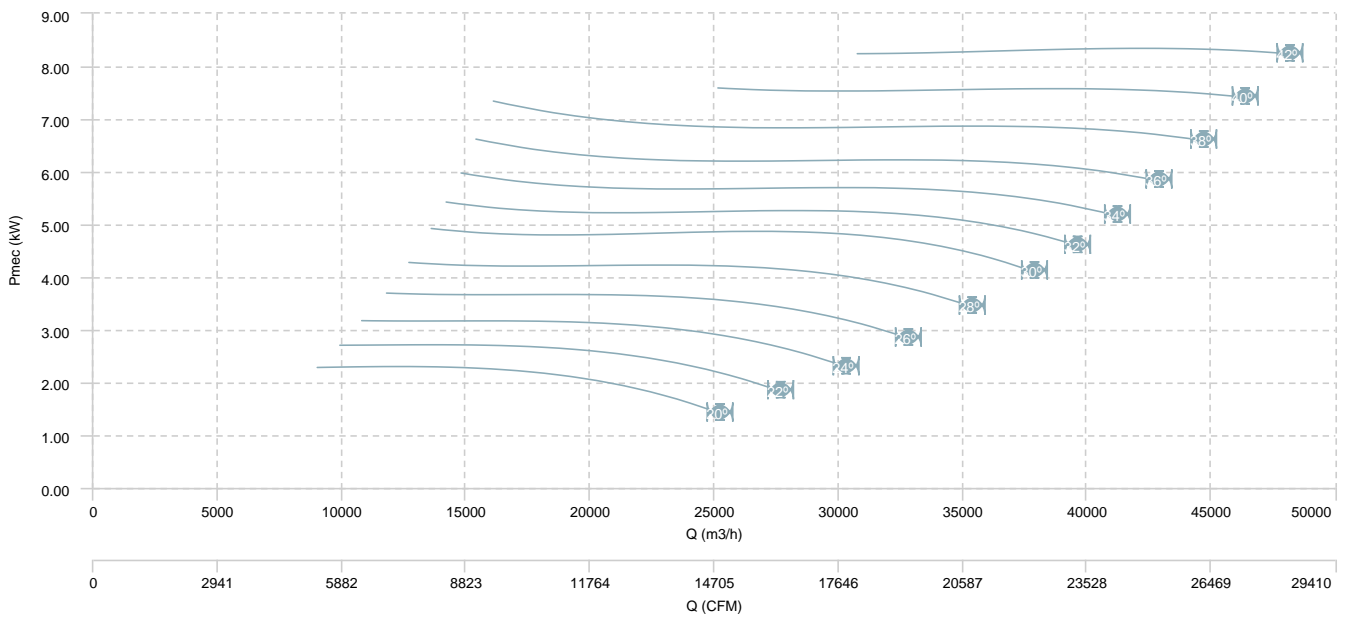


HBF 90 T4/T8 (A3:4) F400

**AIR FLOW - PRESSURE (4 poles)**

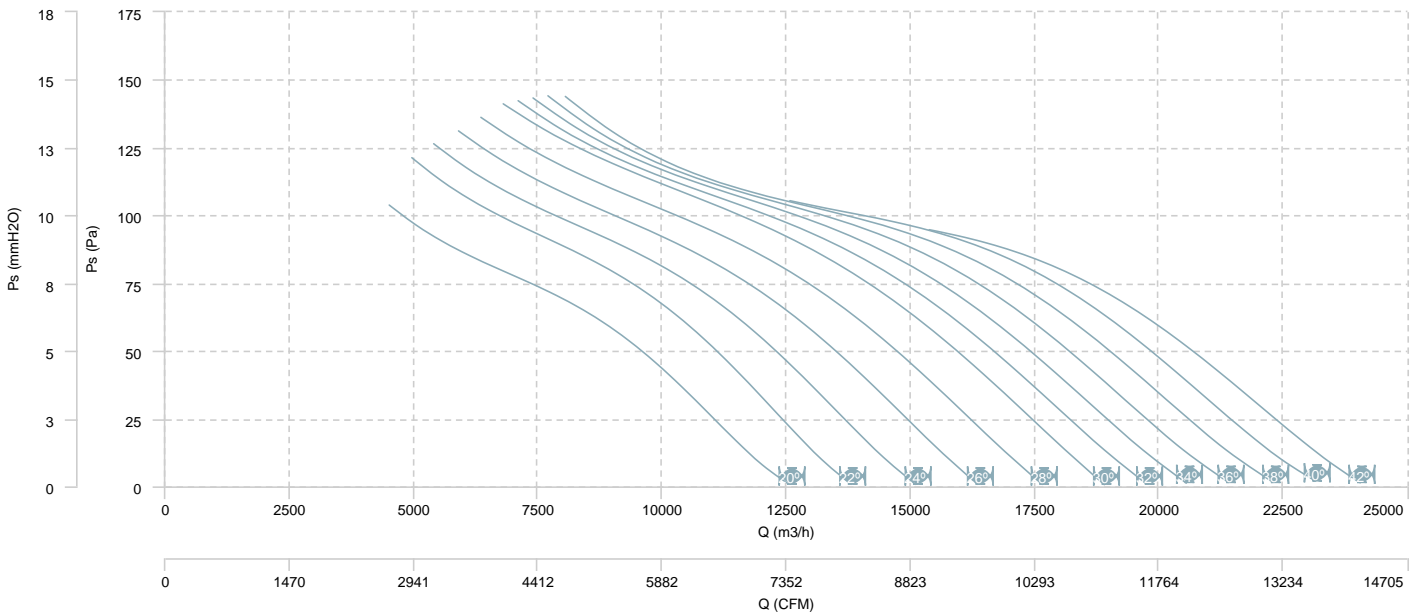


**AIR FLOW - MECHANICAL POWER (4 poles)**

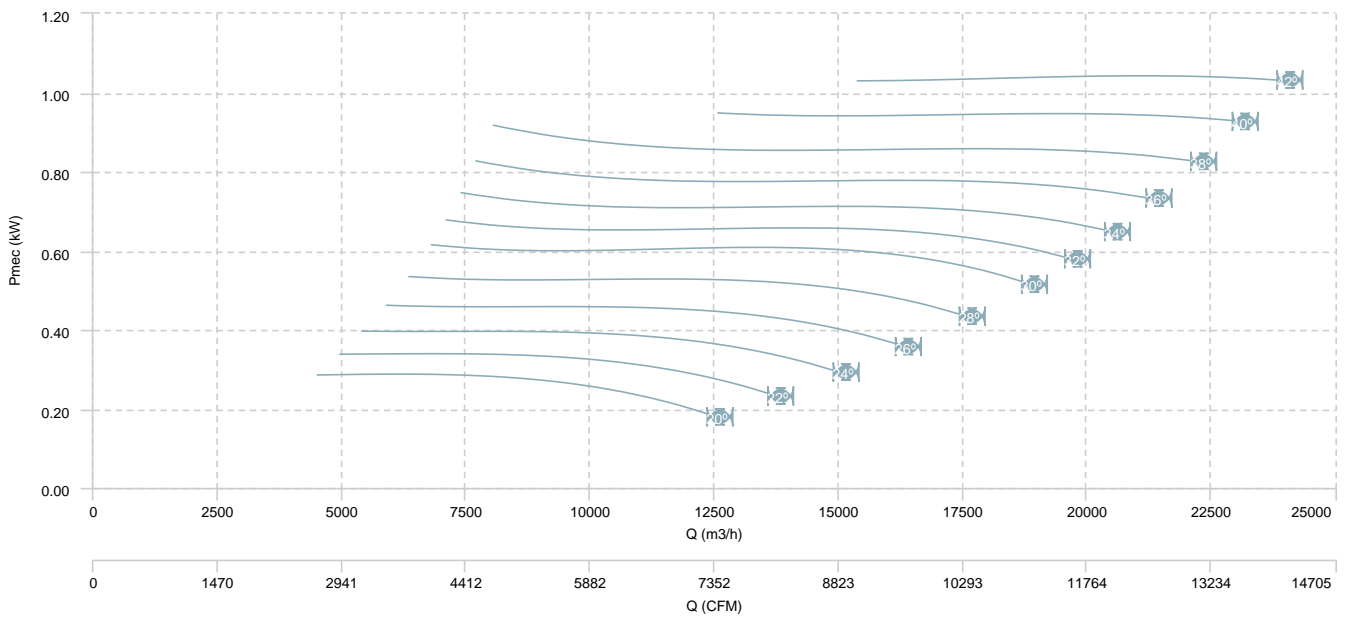


HBF 90 T4/T8 (A3:4) F400

AIR FLOW - PRESSURE (8 poles)

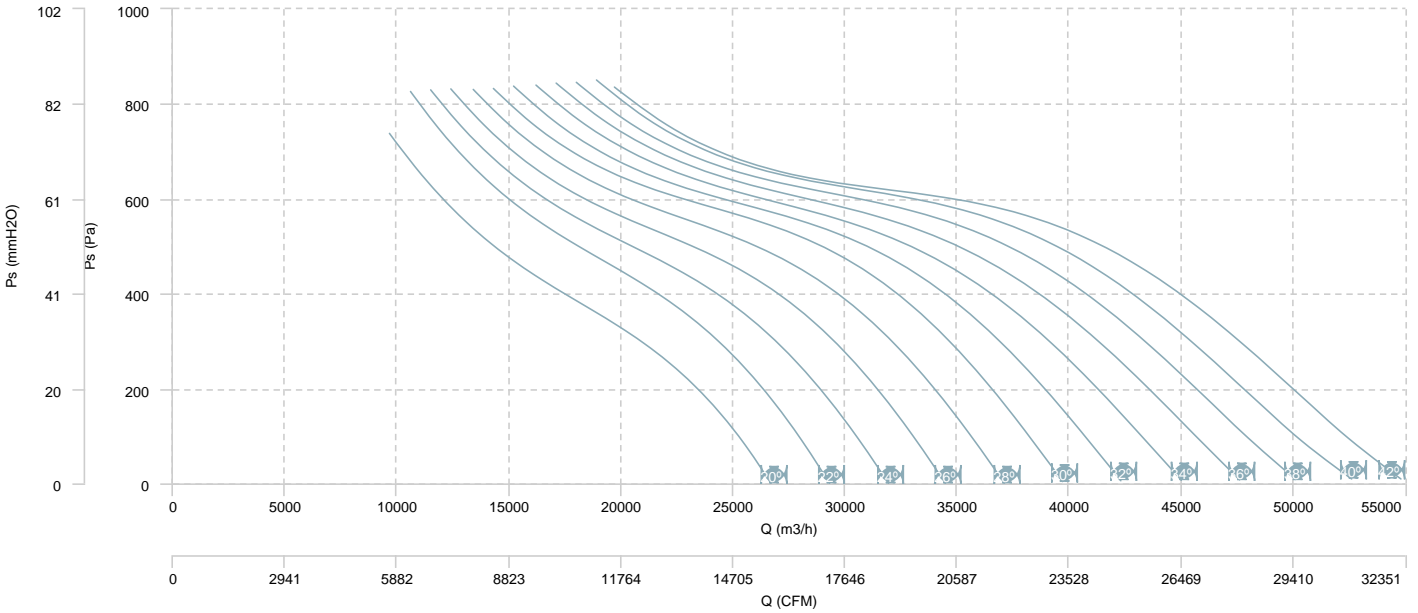


AIR FLOW - MECHANICAL POWER (8 poles)

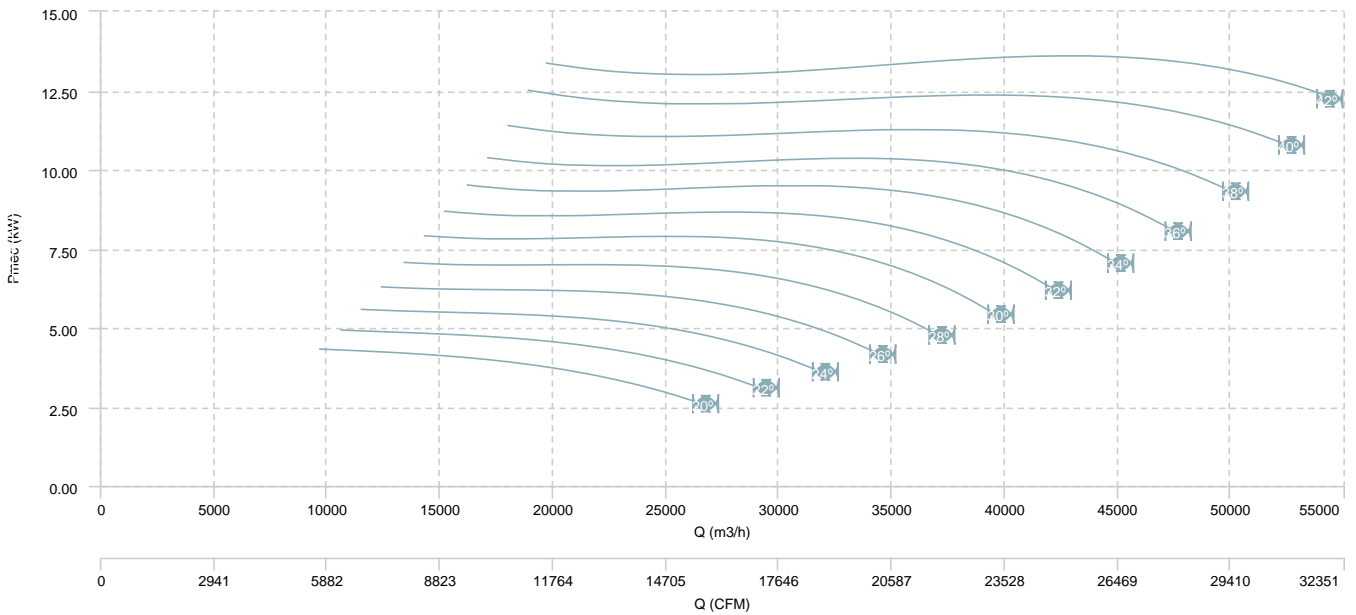


HBF 90 T4/T8 (A3:8) F400

AIR FLOW - PRESSURE (4 poles)

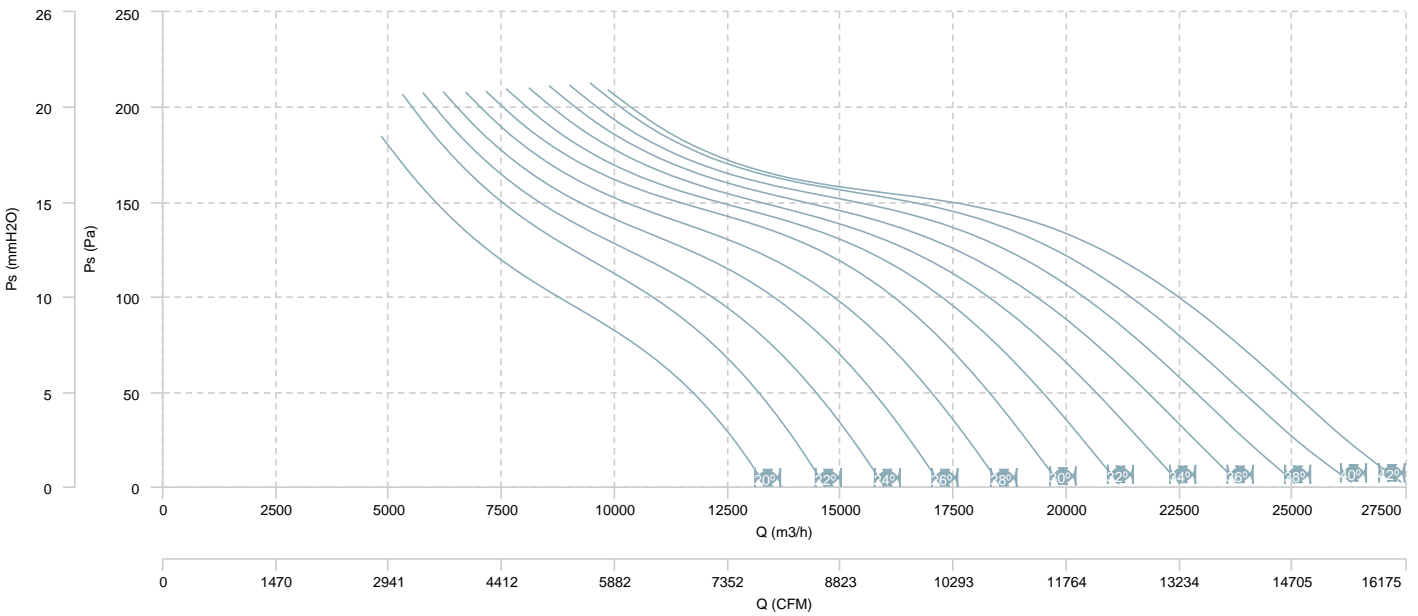


AIR FLOW - MECHANICAL POWER (4 poles)

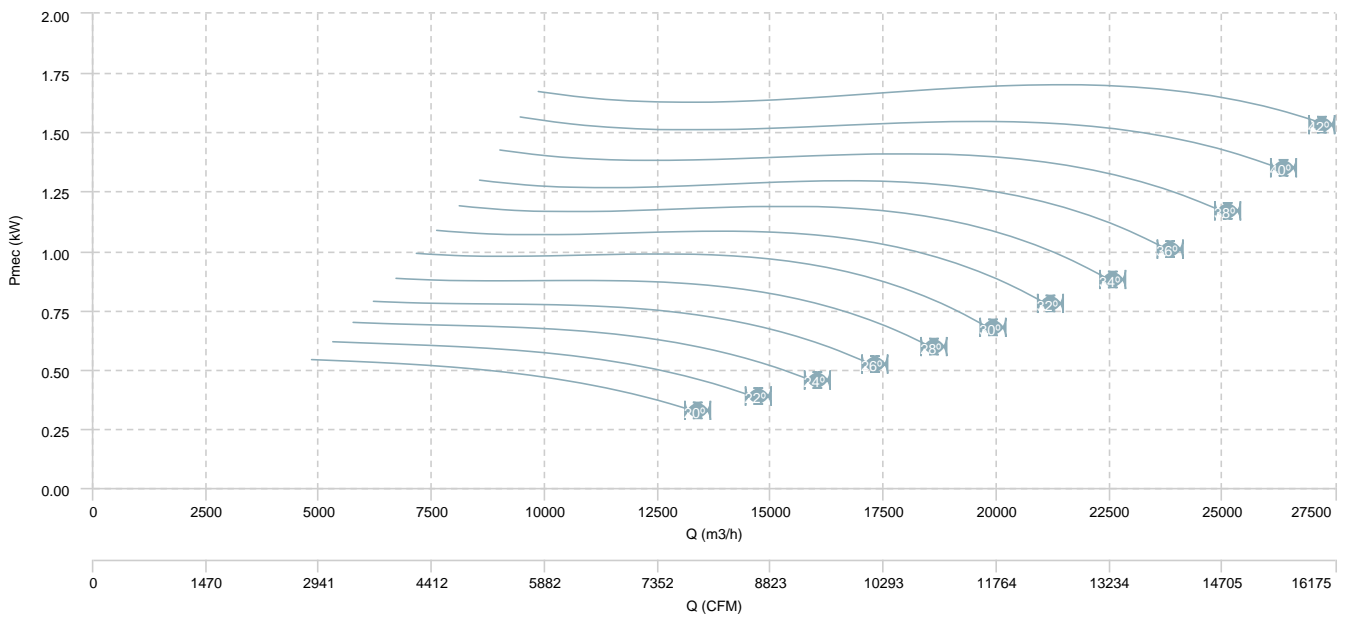


HBF 90 T4/T8 (A3:8) F400

AIR FLOW - PRESSURE (8 poles)



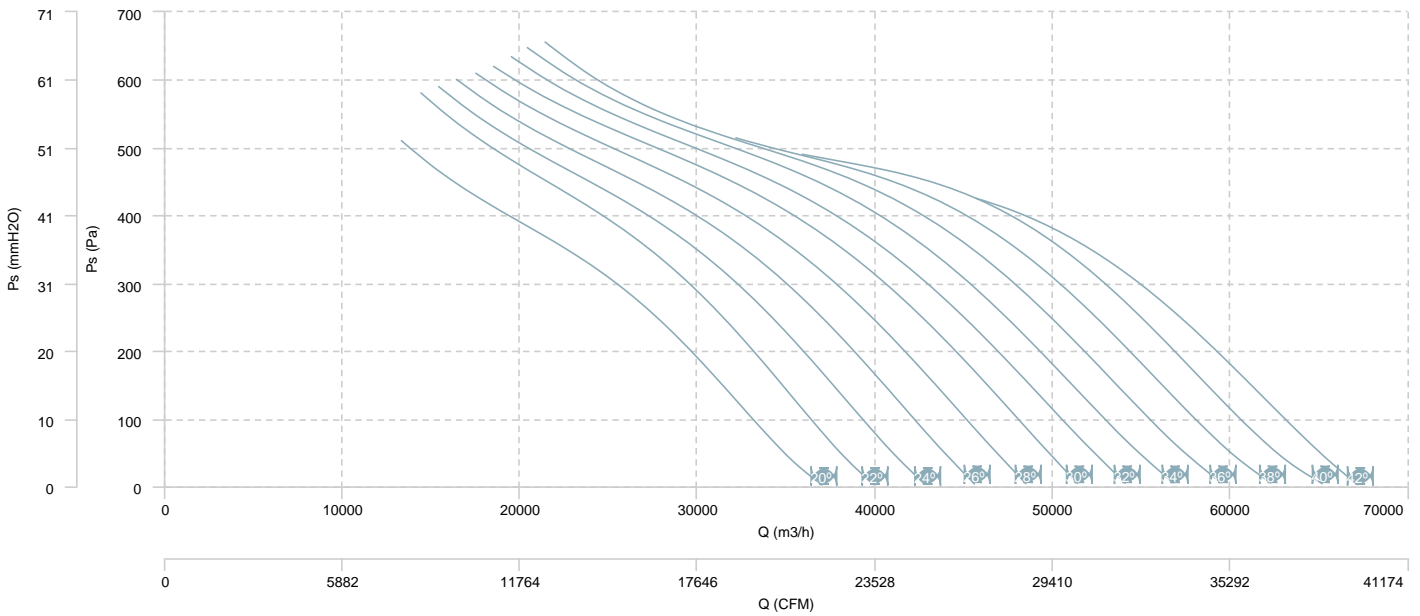
AIR FLOW - MECHANICAL POWER (8 poles)



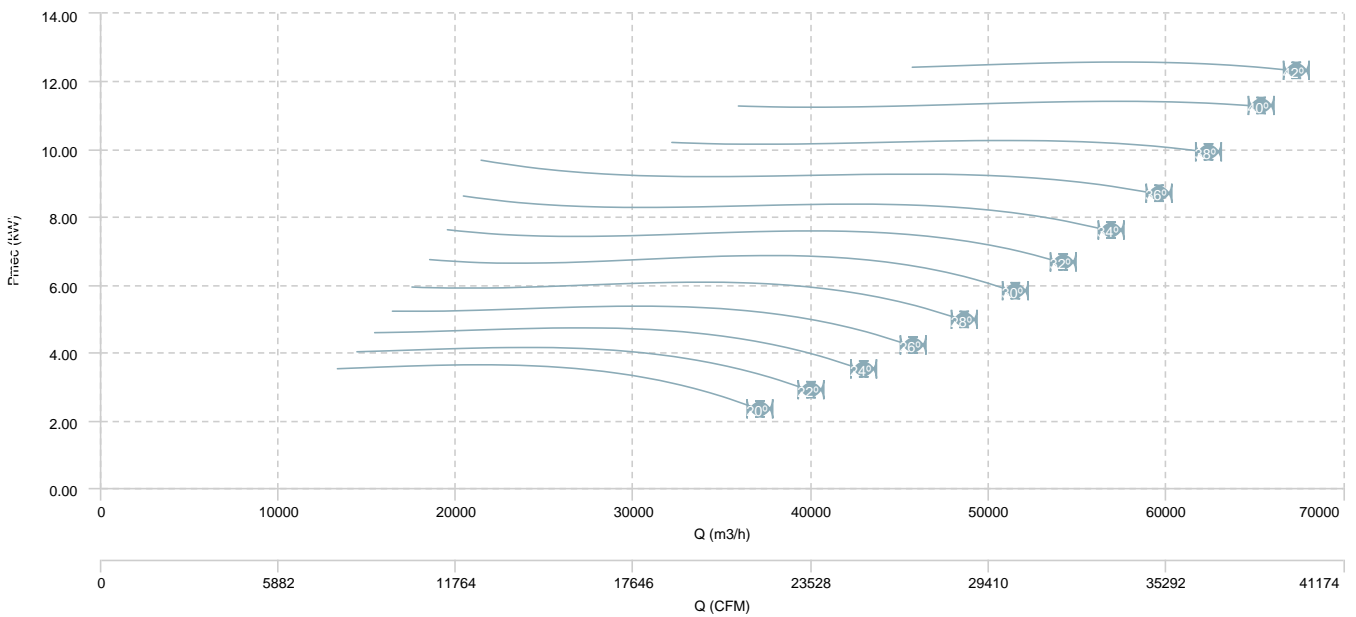


HBF 100 T4 (A3:4) F400

AIR FLOW - PRESSURE

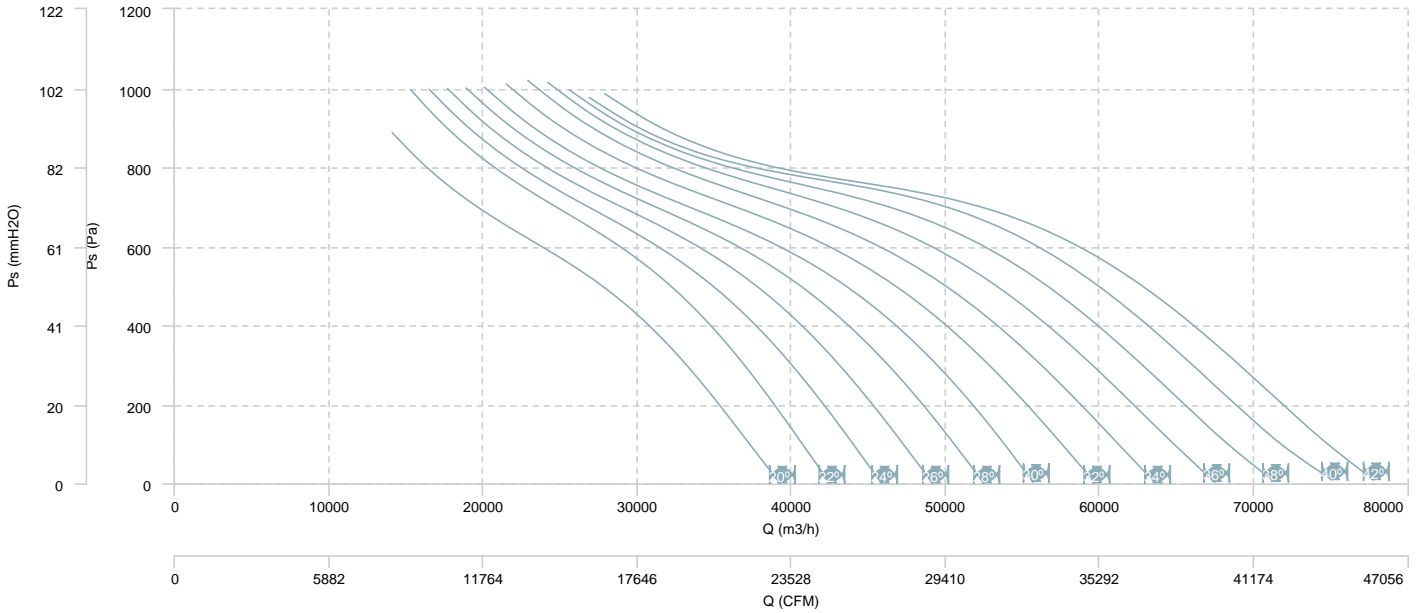


AIR FLOW - MECHANICAL POWER

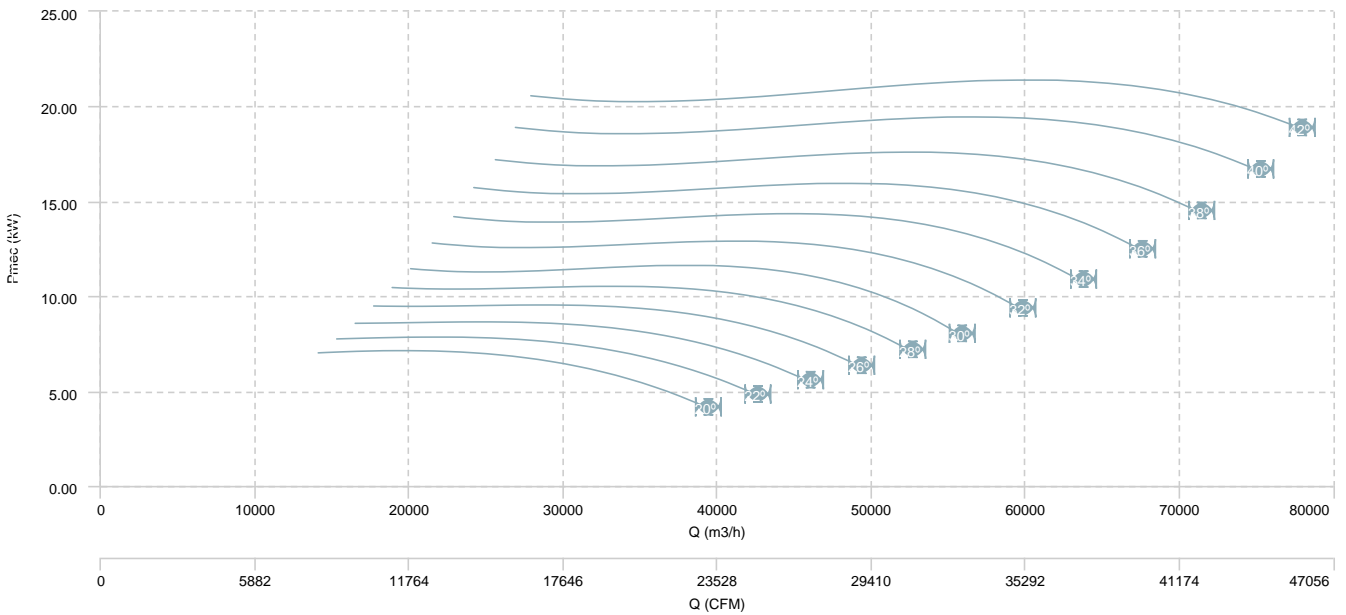


HBF 100 T4 (A3:8) F400

**AIR FLOW - PRESSURE**

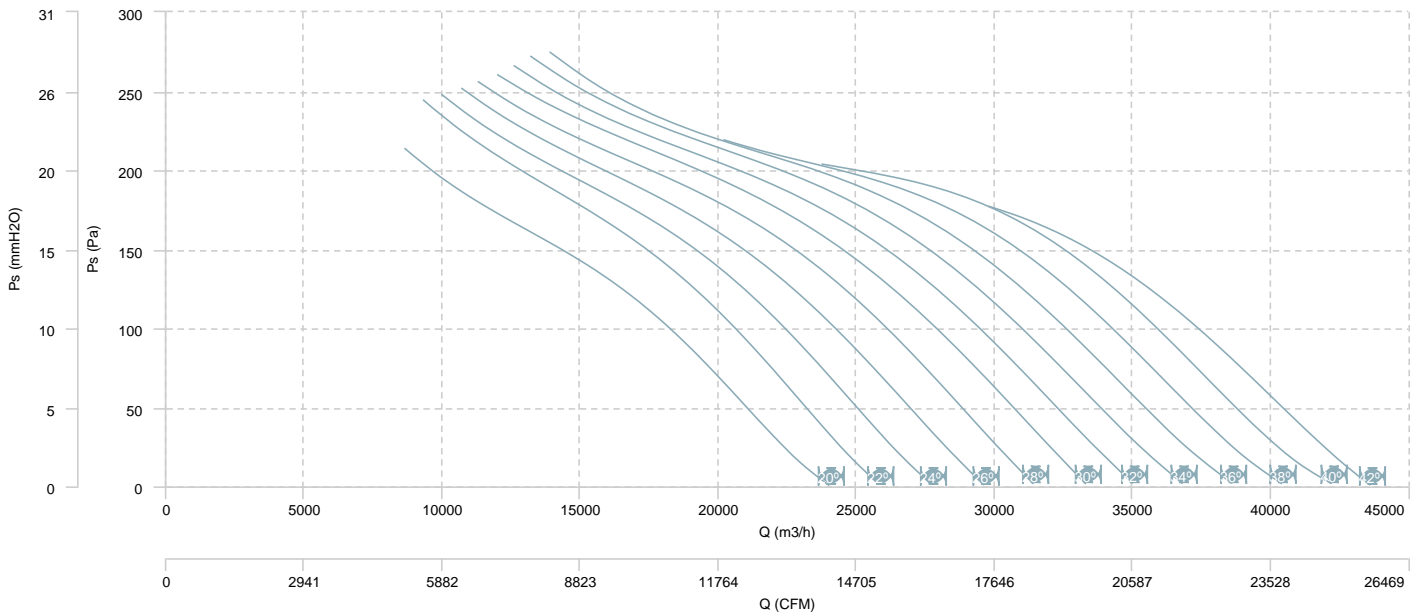


**AIR FLOW - MECHANICAL POWER**

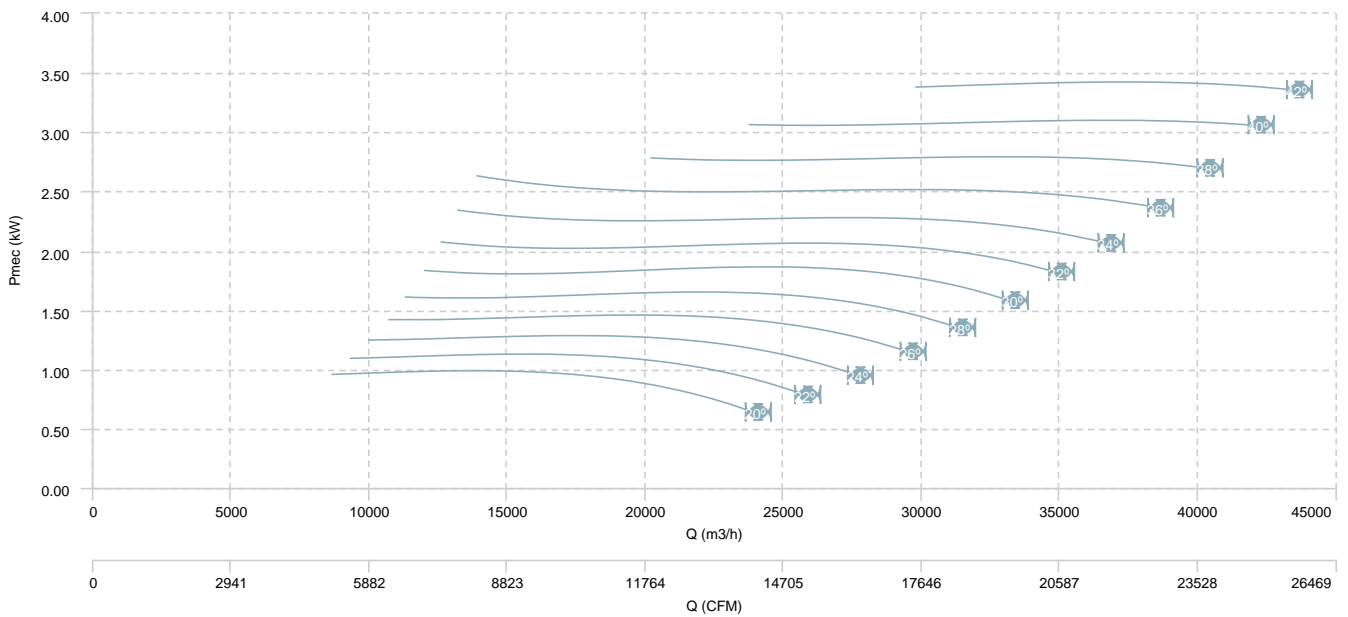


HBF 100 T6 (A3:4) F400

**AIR FLOW - PRESSURE**

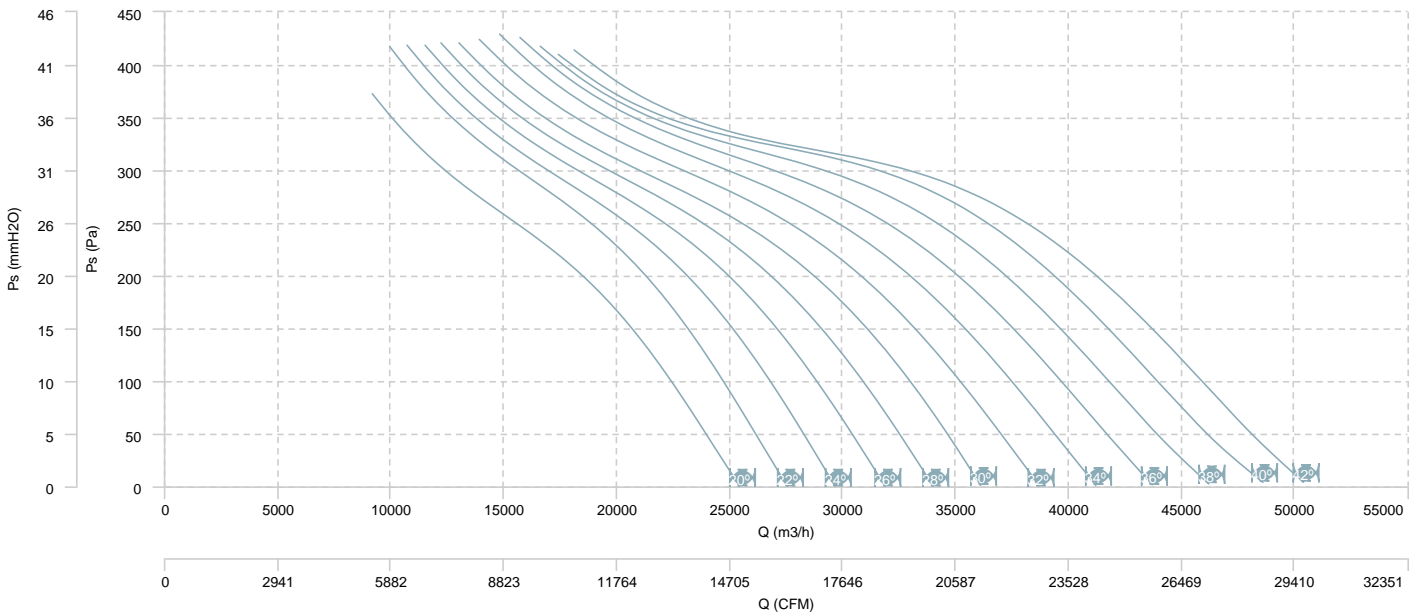


**AIR FLOW - MECHANICAL POWER**

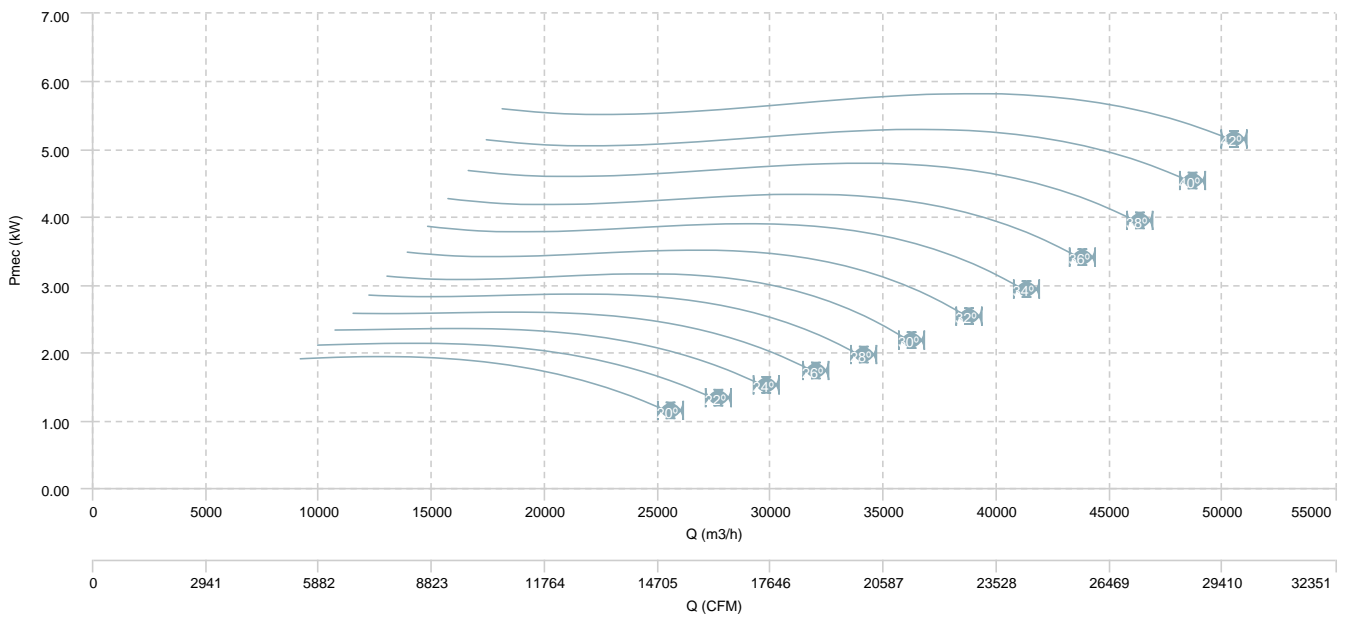


HBF 100 T6 (A3:8) F400

**AIR FLOW - PRESSURE**

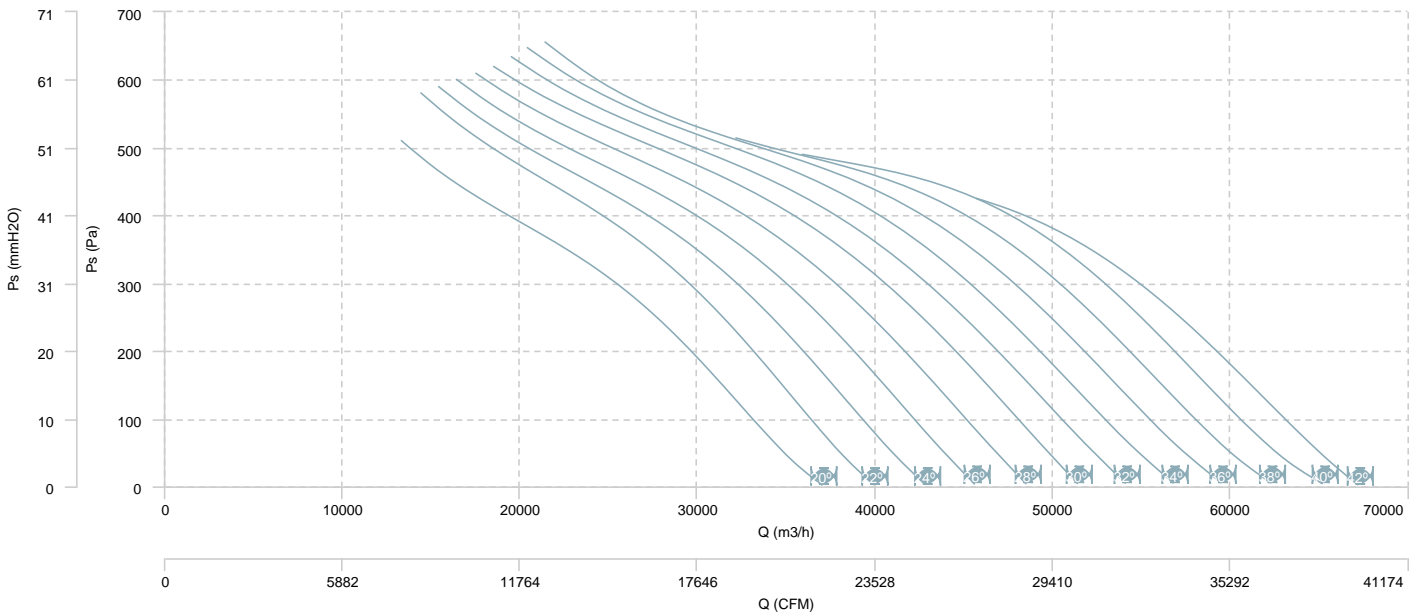


**AIR FLOW - MECHANICAL POWER**

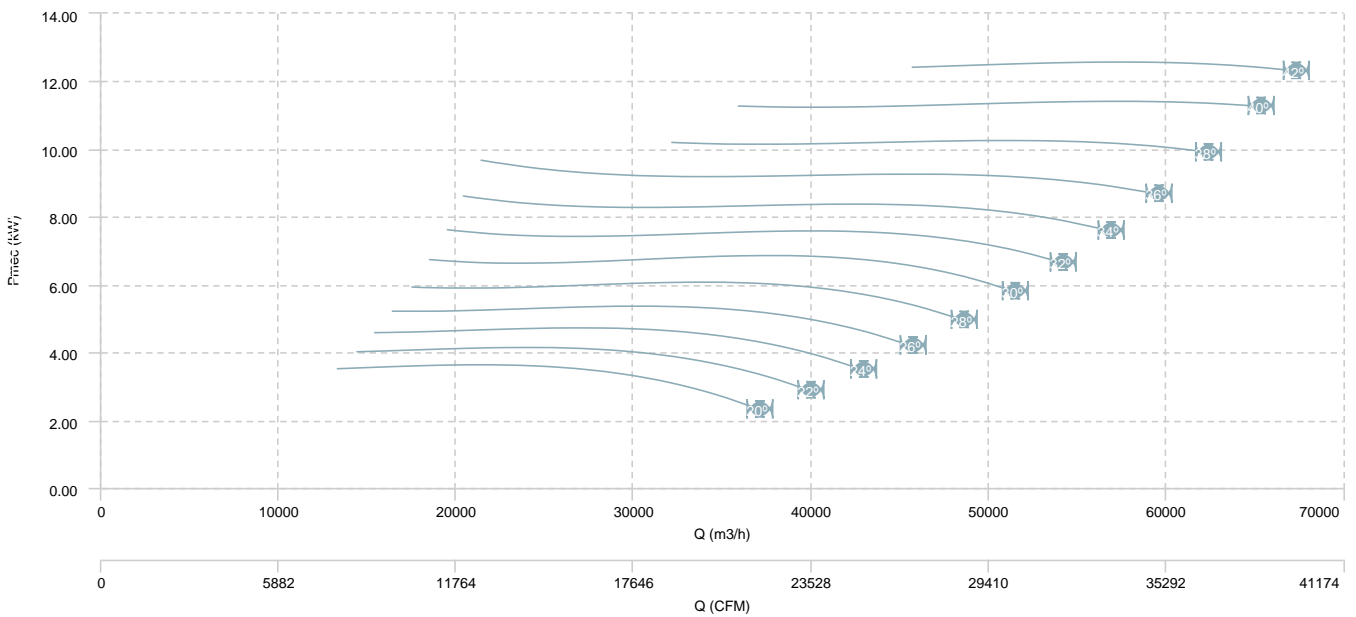


HBF 100 T4/T8 (A3:4) F400

**AIR FLOW - PRESSURE (4 poles)**

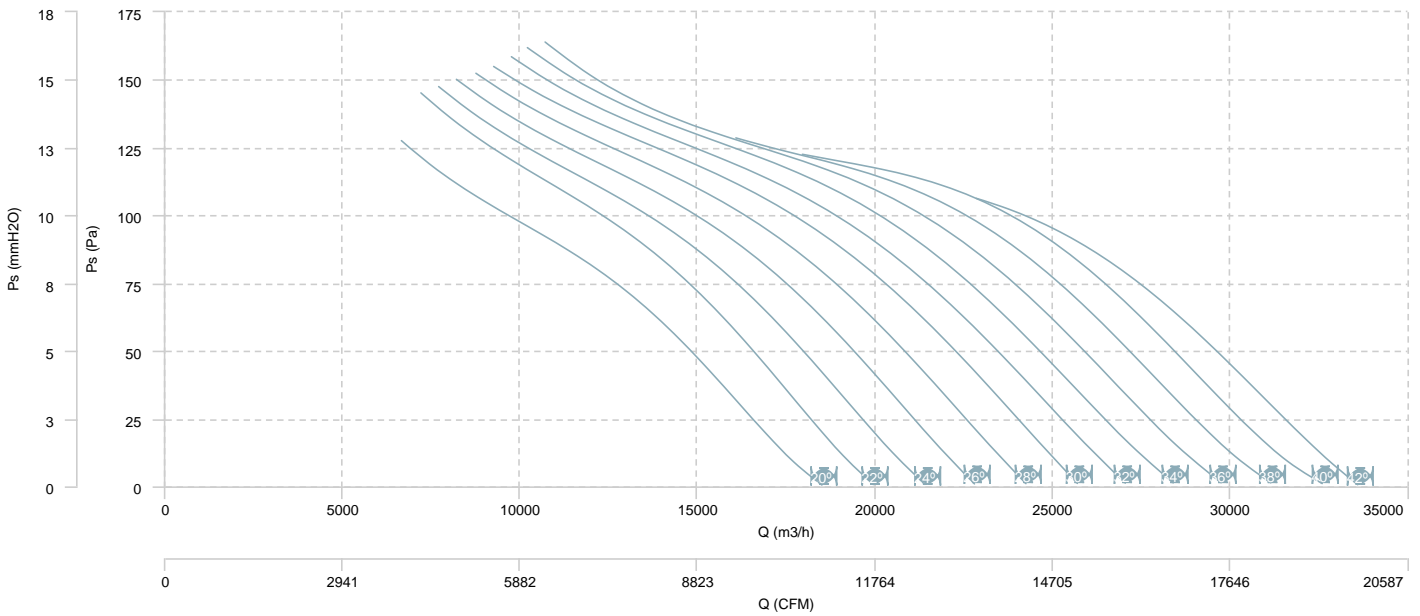


**AIR FLOW - MECHANICAL POWER (4 poles)**

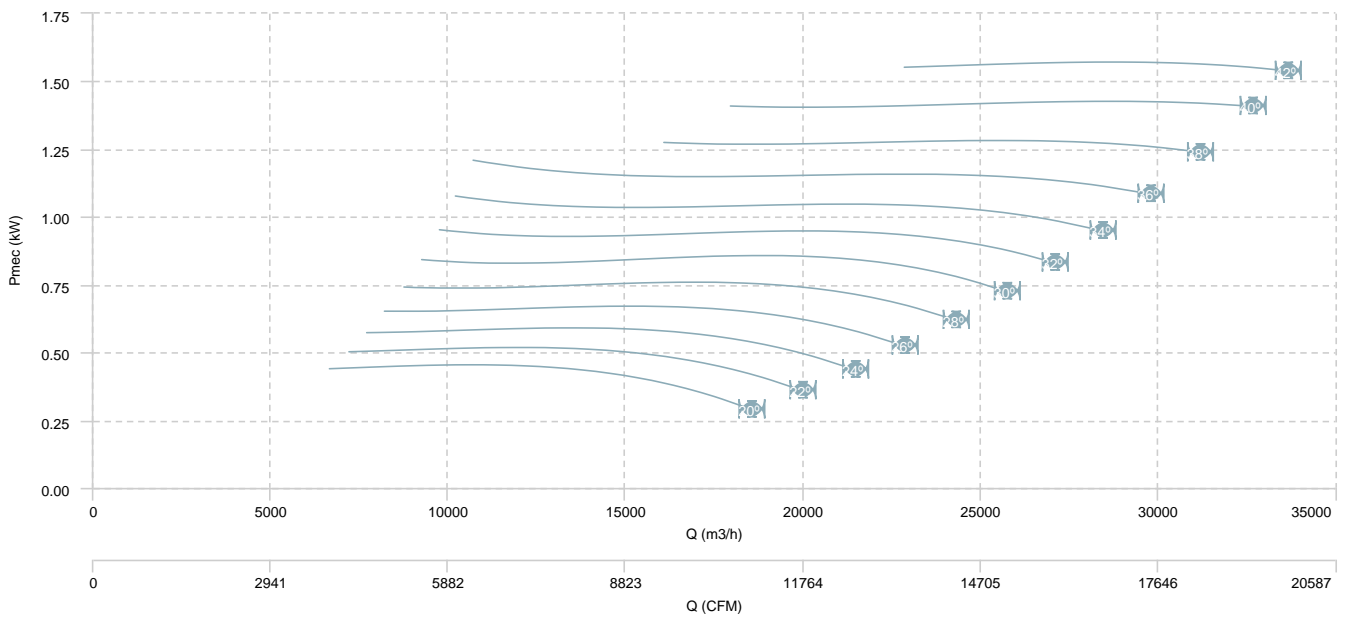


HBF 100 T4/T8 (A3:4) F400

AIR FLOW - PRESSURE (8 poles)

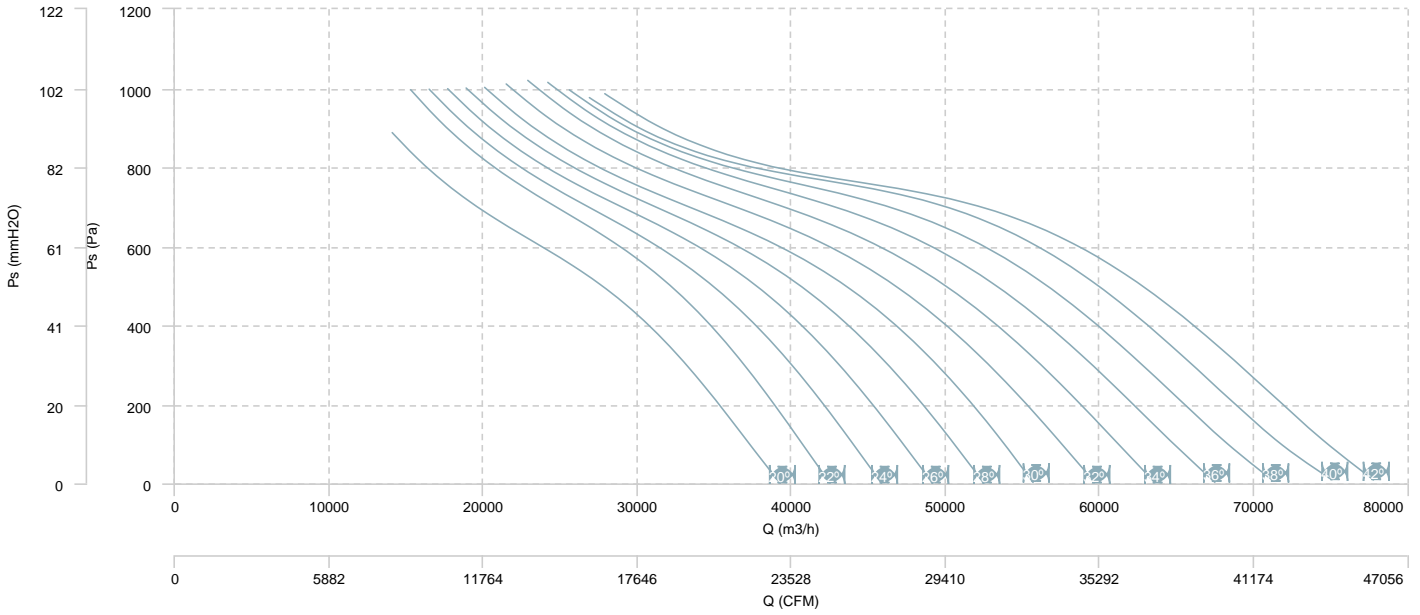


AIR FLOW - MECHANICAL POWER (8 poles)

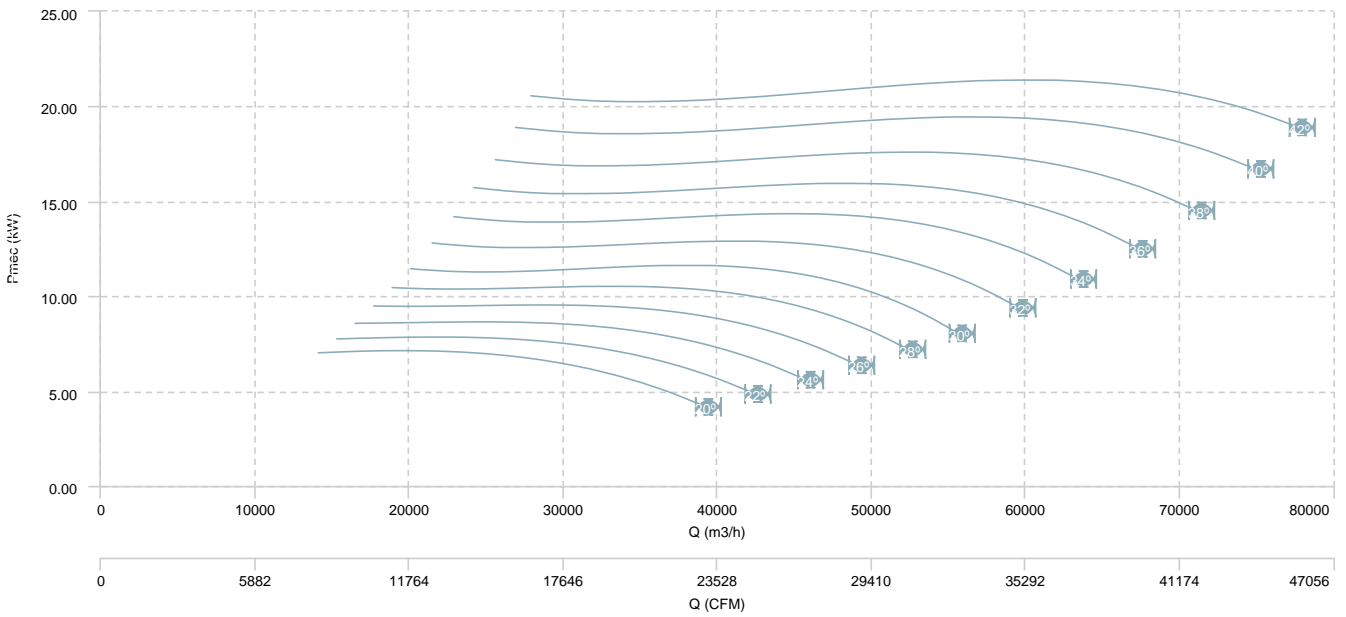


HBF 100 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (4 poles)**

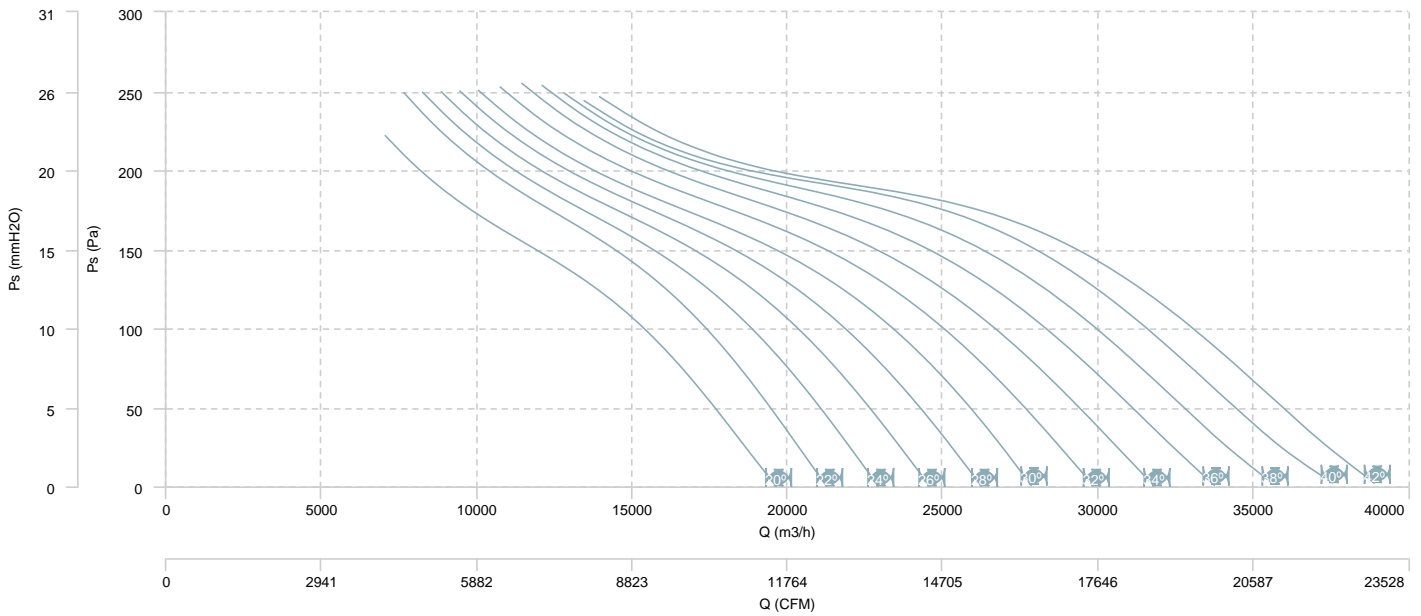


**AIR FLOW - MECHANICAL POWER (4 poles)**

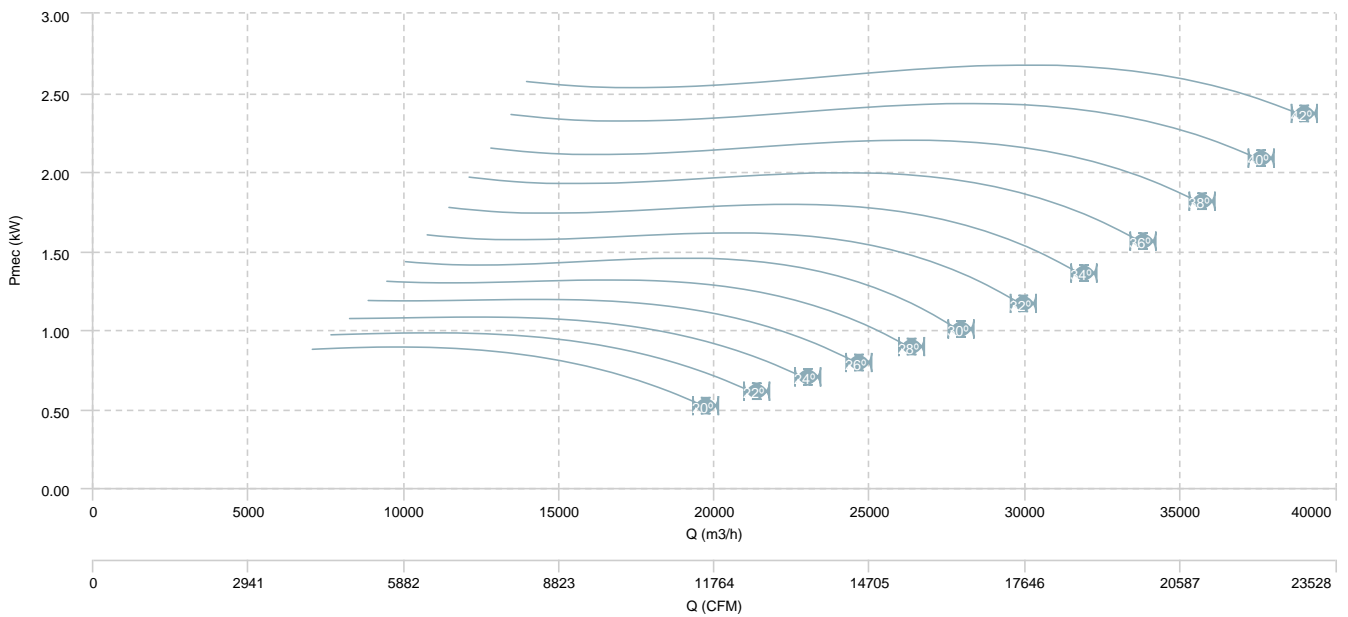


HBF 100 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (8 poles)**



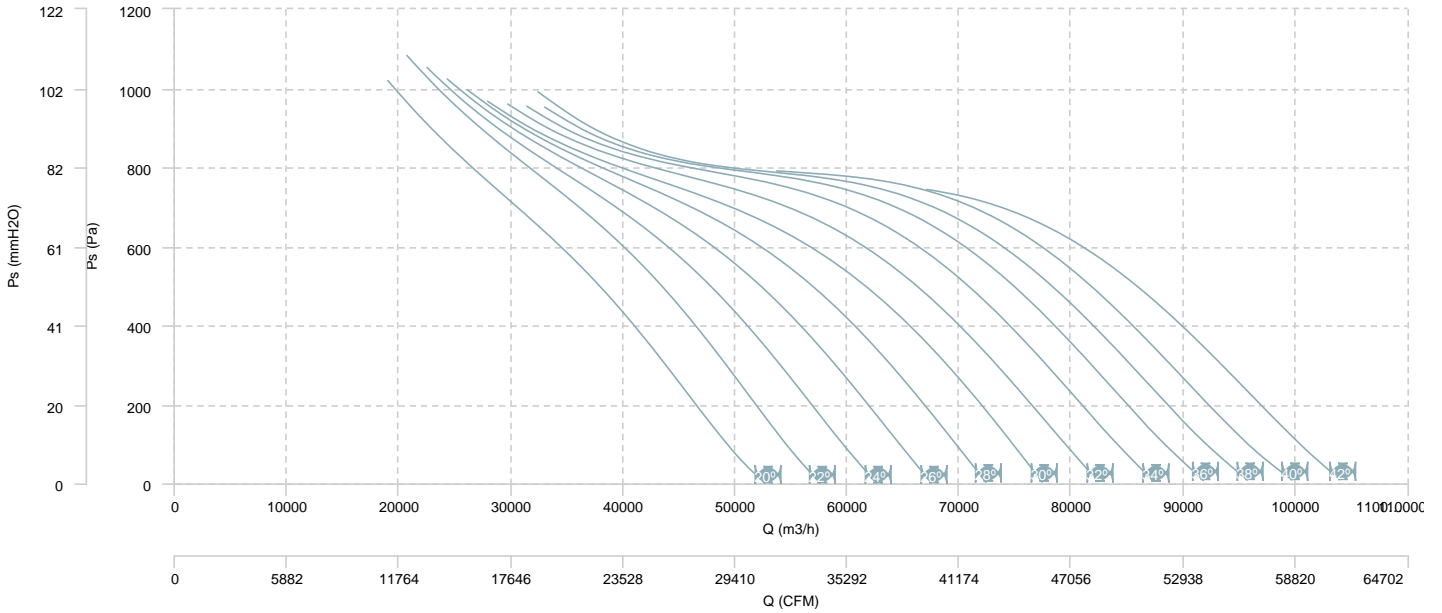
**AIR FLOW - MECHANICAL POWER (8 poles)**



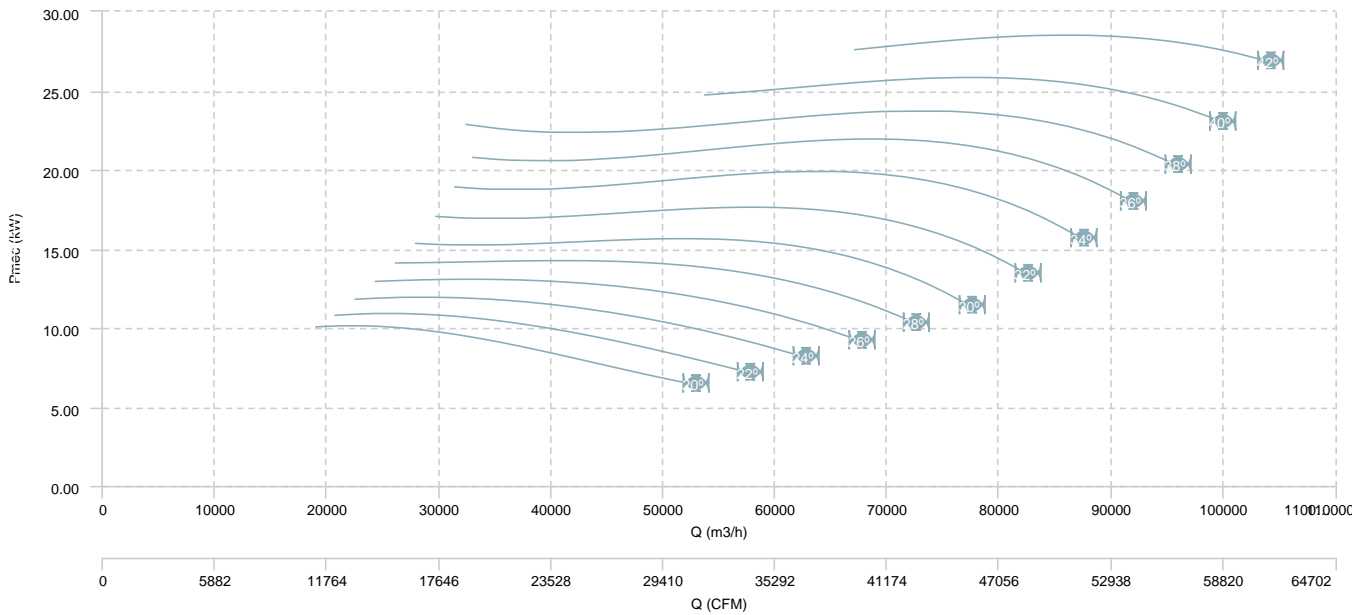


HBF 112 T4 (A3:8) F400

**AIR FLOW - PRESSURE**

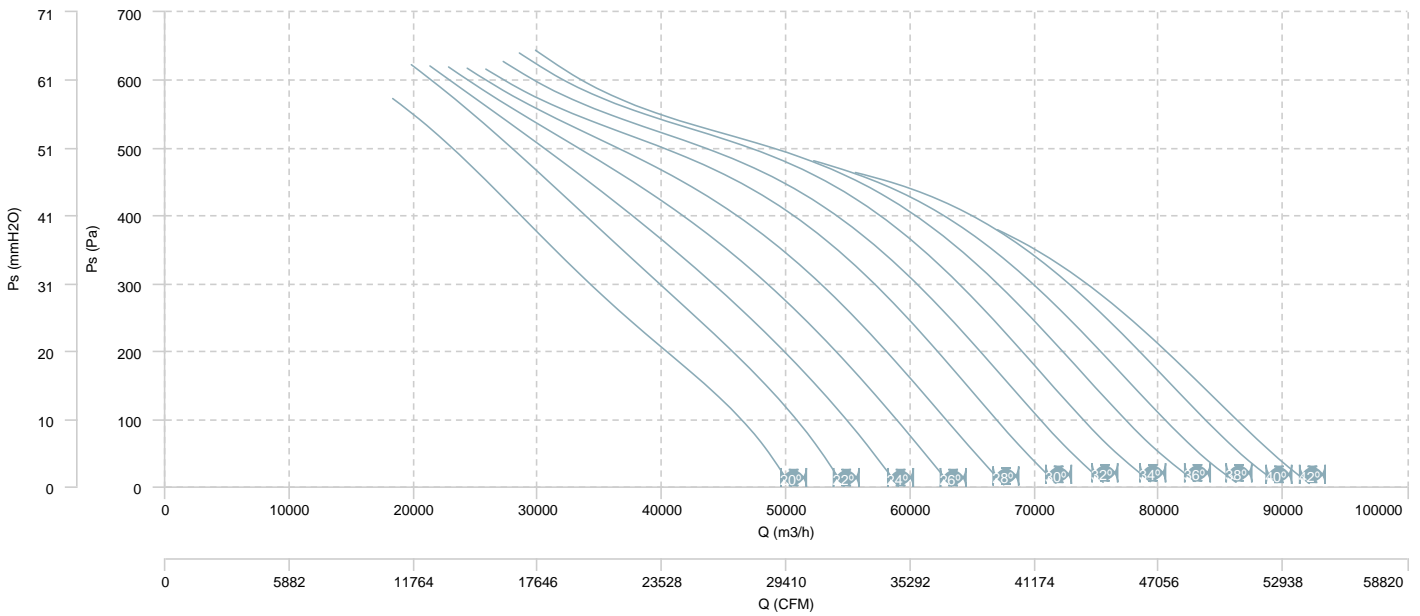


**AIR FLOW - MECHANICAL POWER**

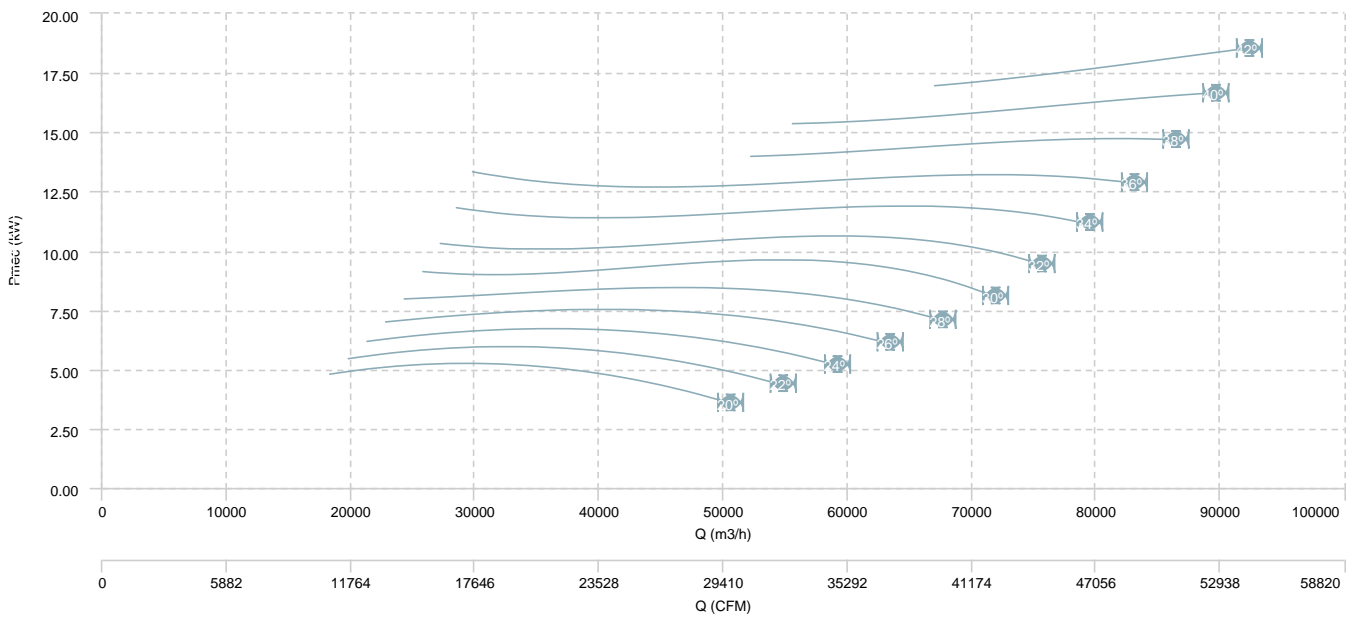


HBF 112 T4 (A3:4) F400

AIR FLOW - PRESSURE

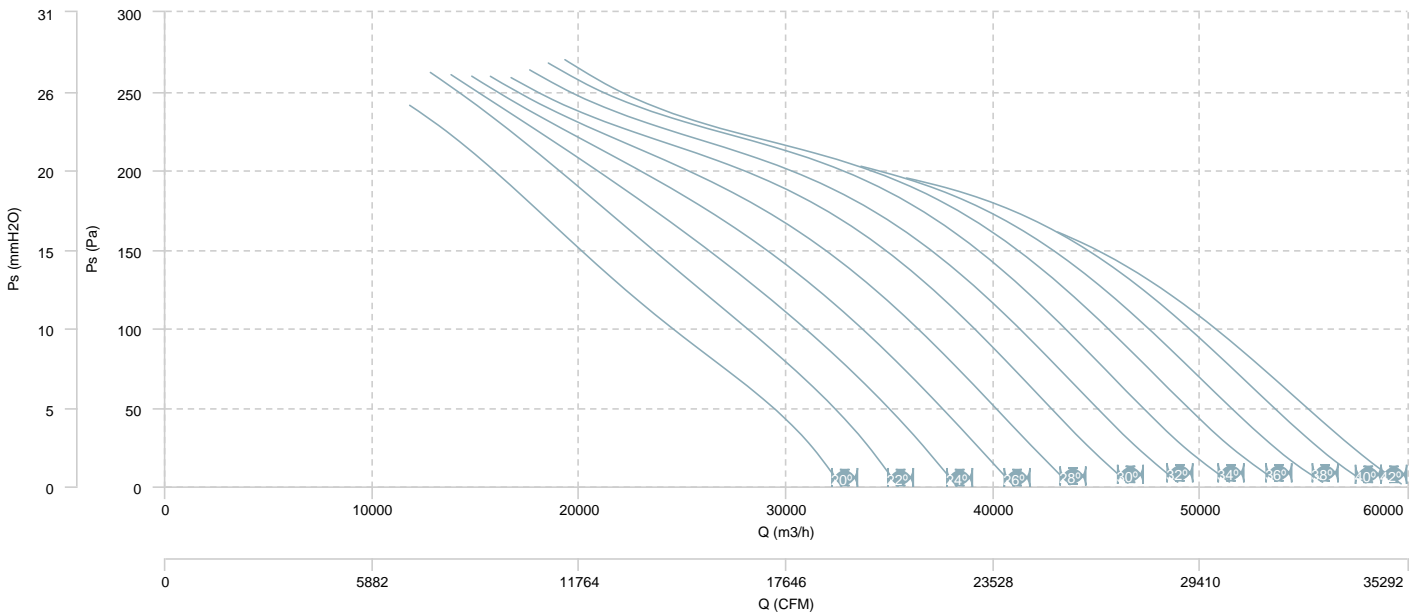


AIR FLOW - MECHANICAL POWER

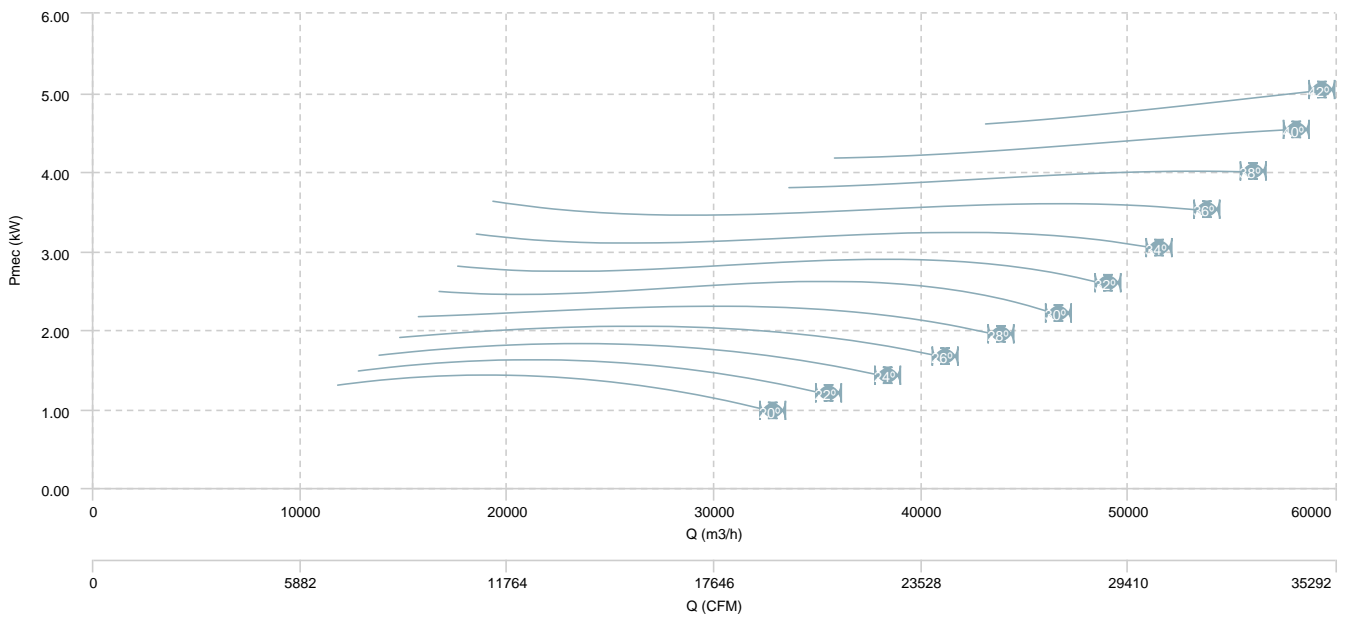


HBF 112 T6 (A3:4) F400

**AIR FLOW - PRESSURE**

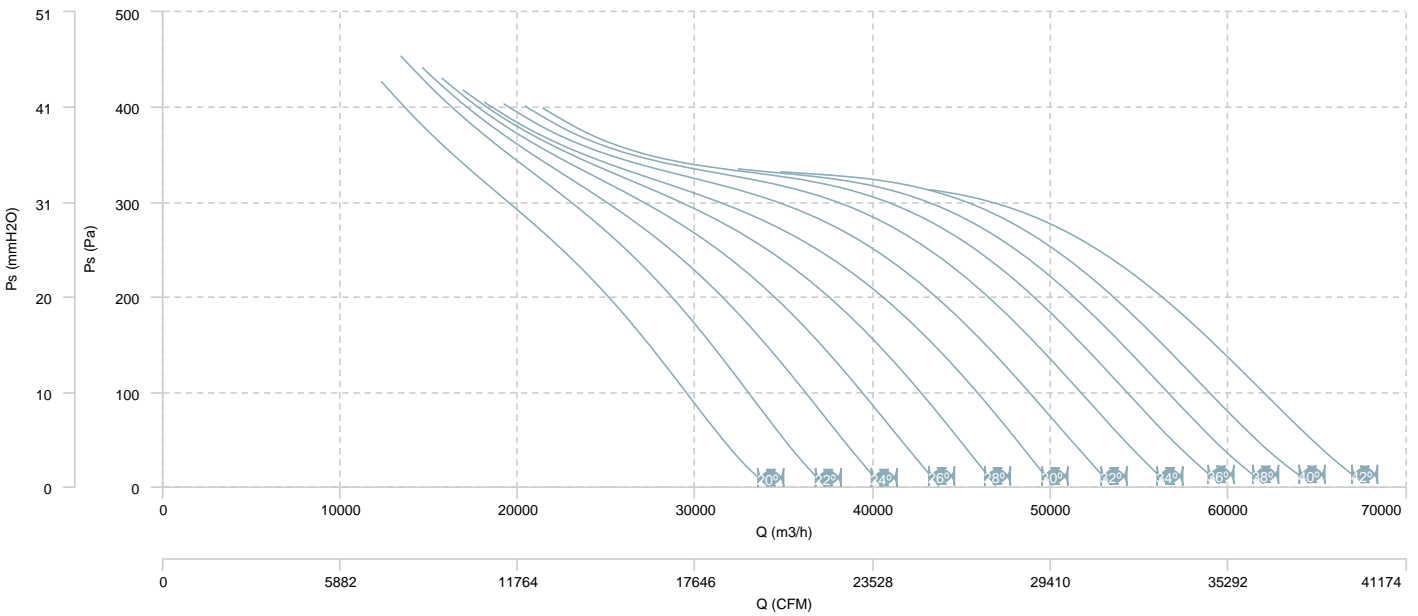


**AIR FLOW - MECHANICAL POWER**

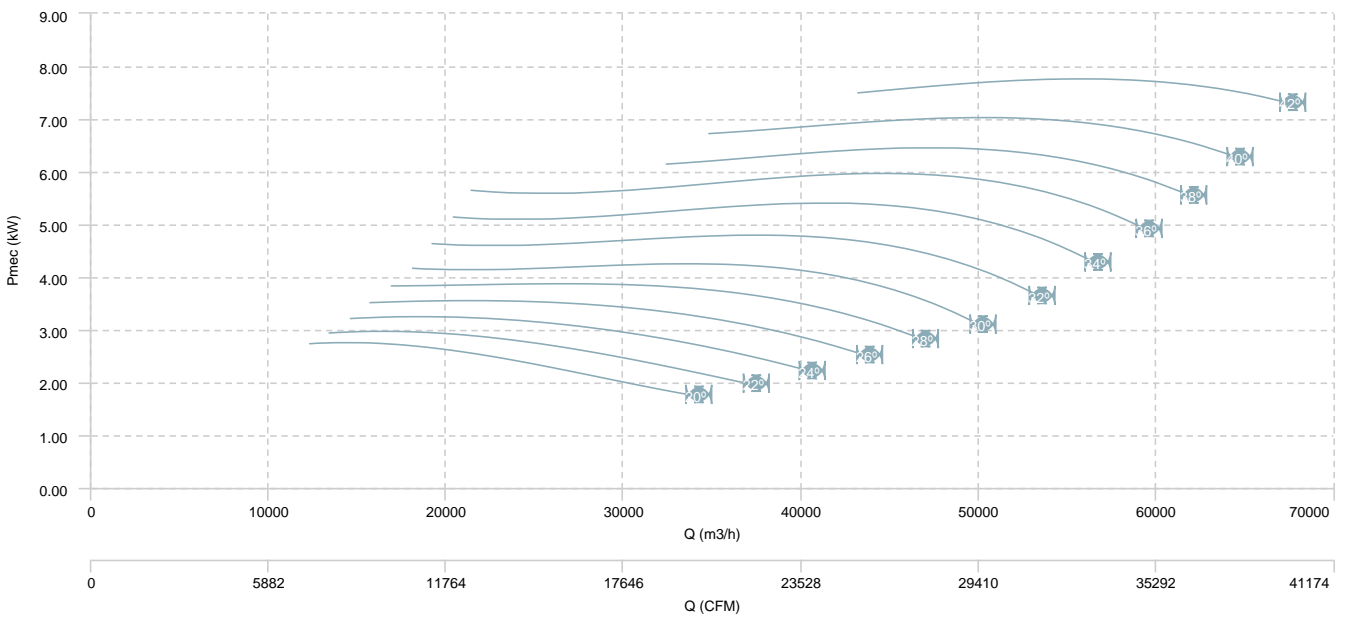


HBF 112 T6 (A3:8) F400

**AIR FLOW - PRESSURE**

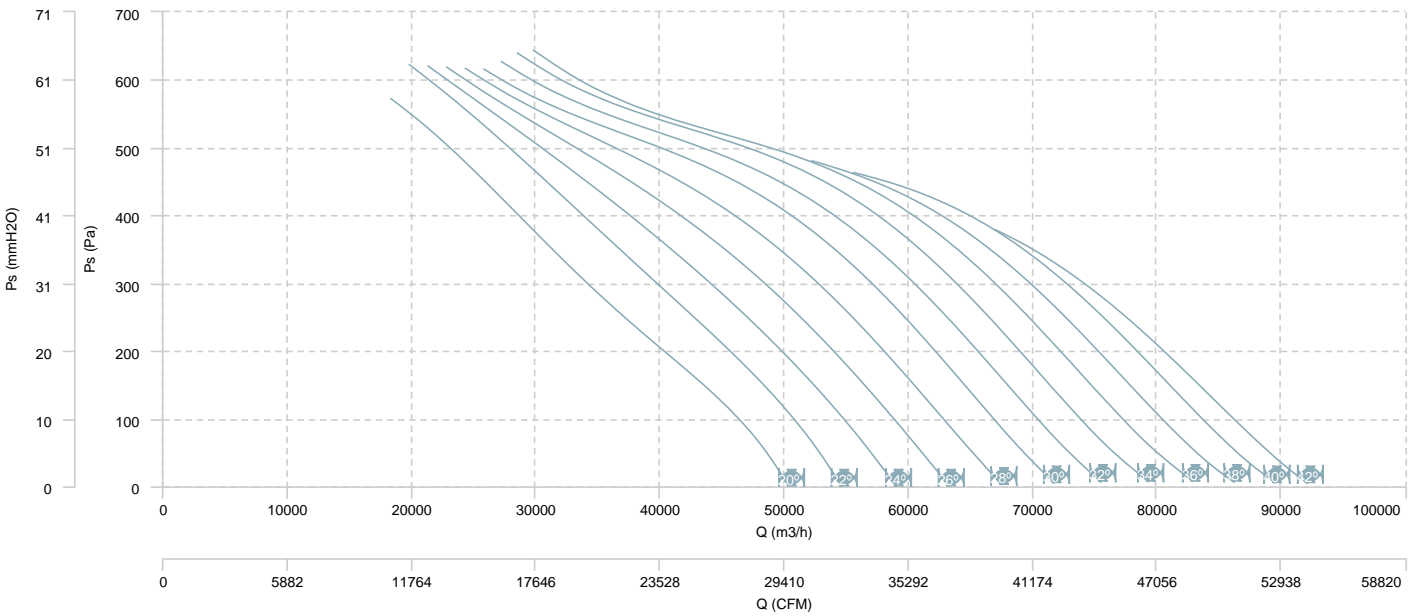


**AIR FLOW - MECHANICAL POWER**

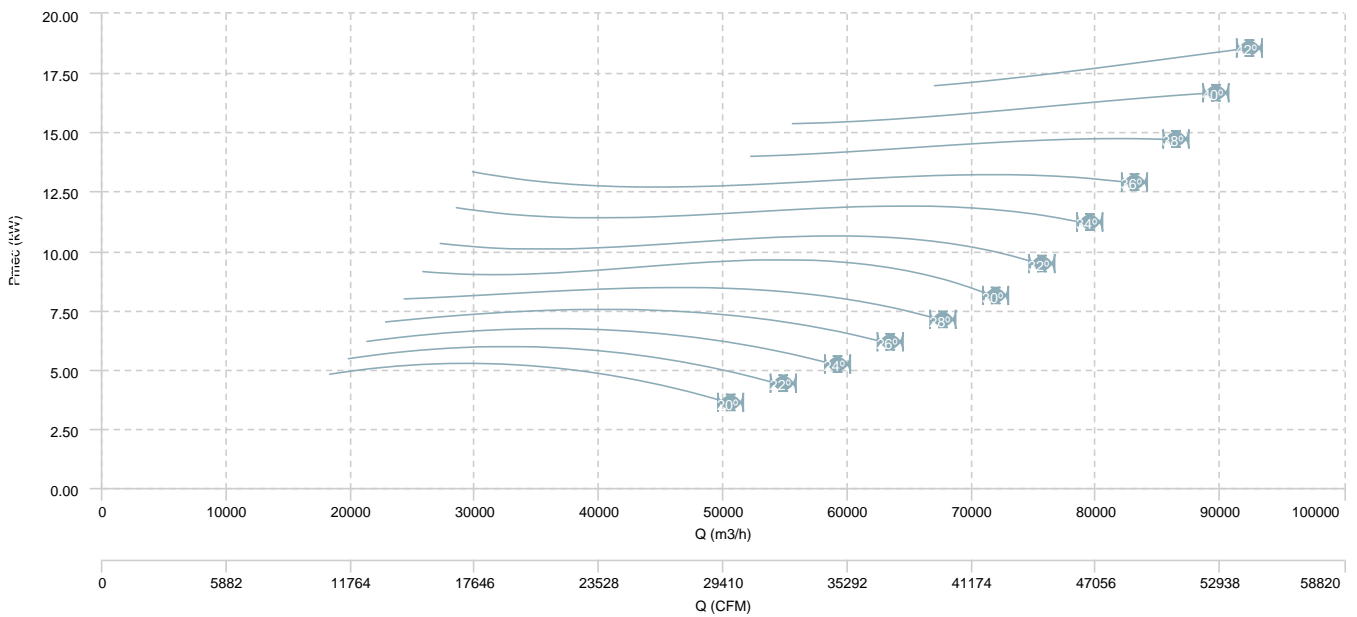


HBF 112 T4/T8 (A3:4) F400

AIR FLOW - PRESSURE (4 poles)

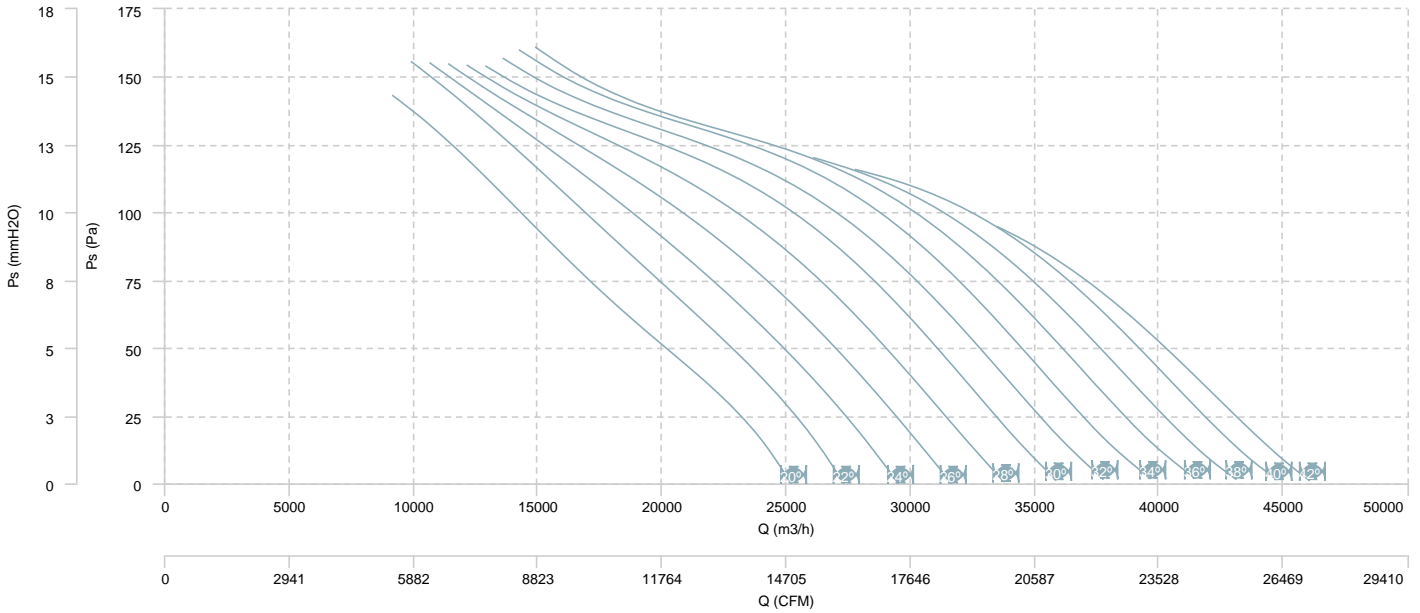


AIR FLOW - MECHANICAL POWER (4 poles)

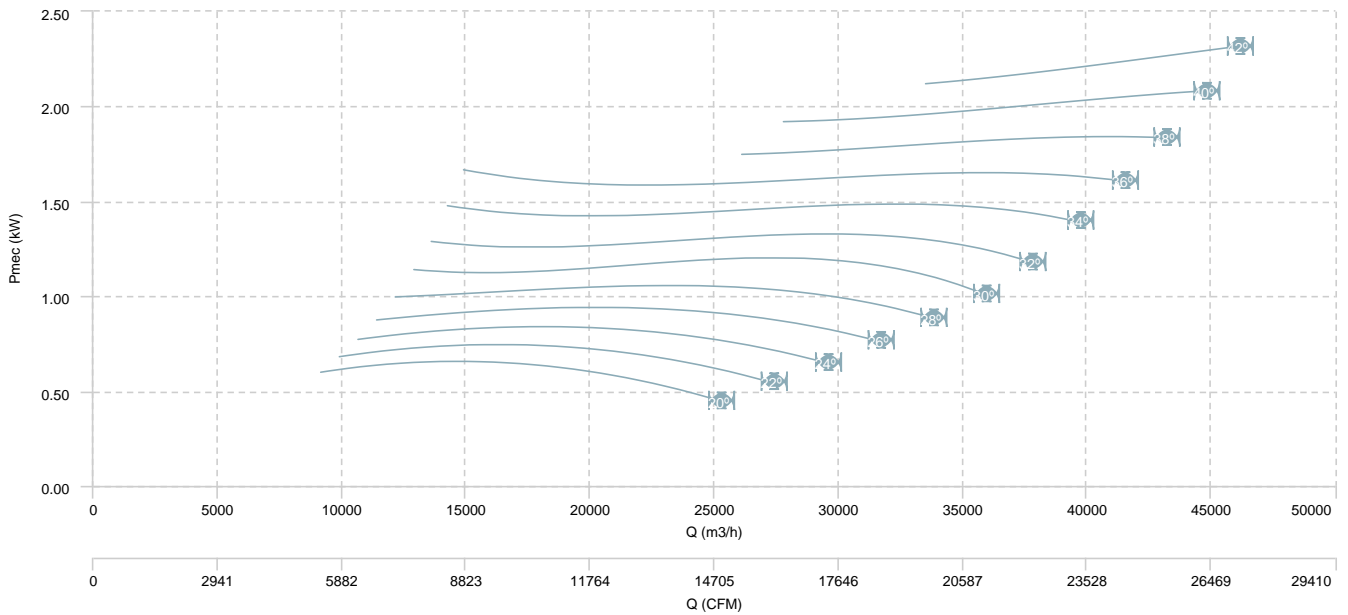


HBF 112 T4/T8 (A3:4) F400

**AIR FLOW - PRESSURE (8 poles)**

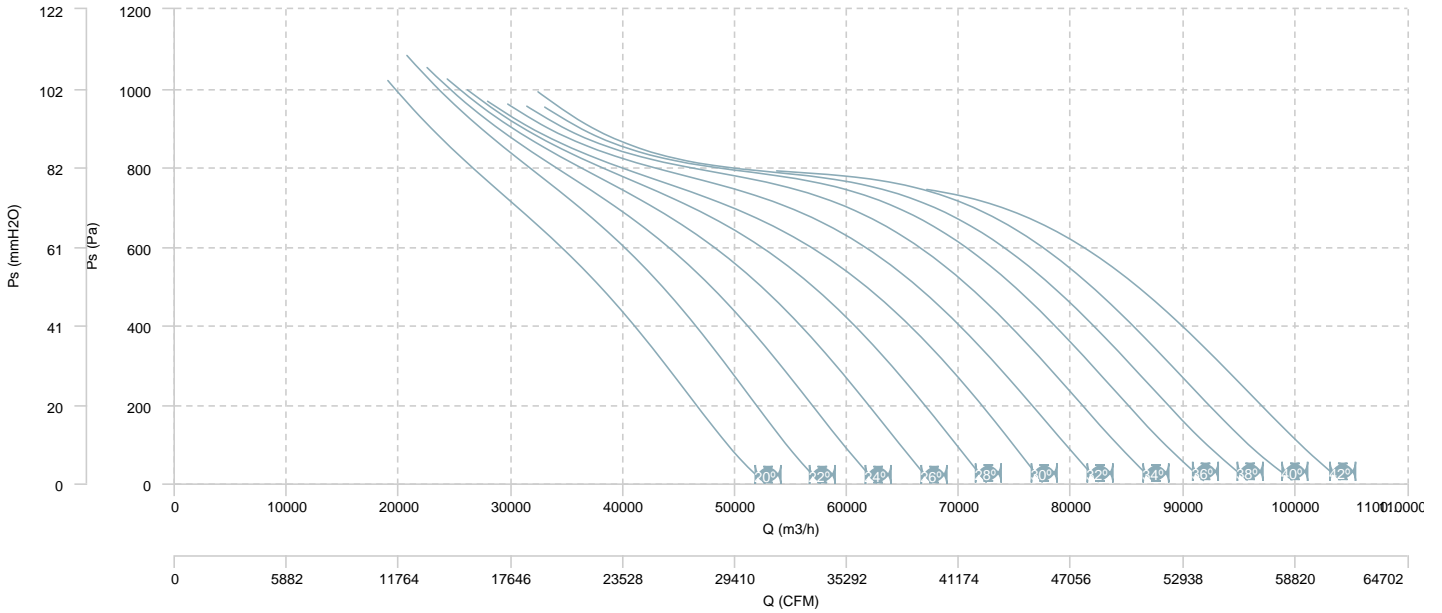


**AIR FLOW - MECHANICAL POWER (8 poles)**

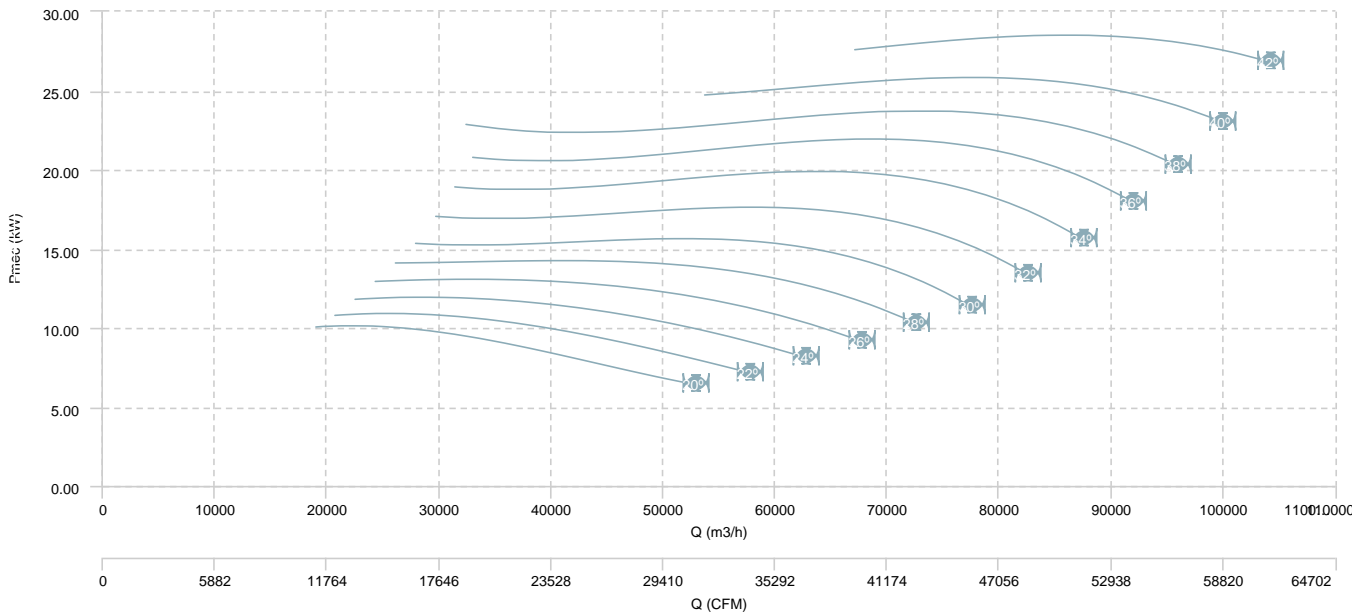


HBF 112 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (4 poles)**

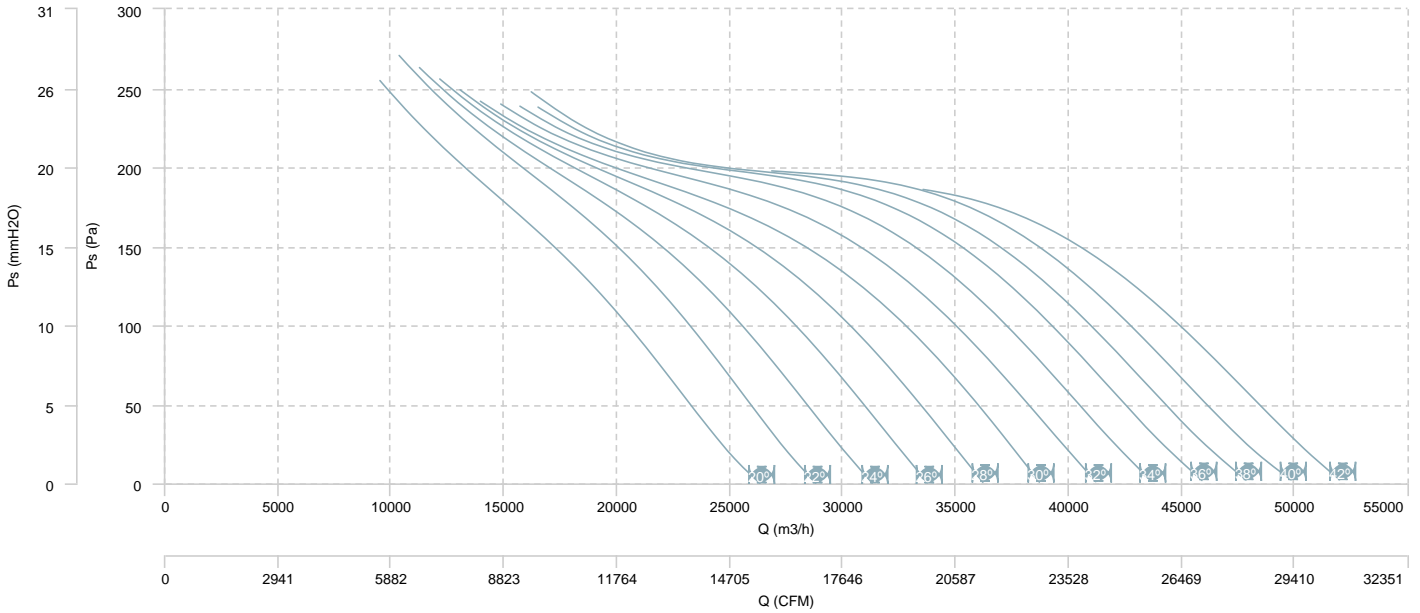


**AIR FLOW - MECHANICAL POWER (4 poles)**

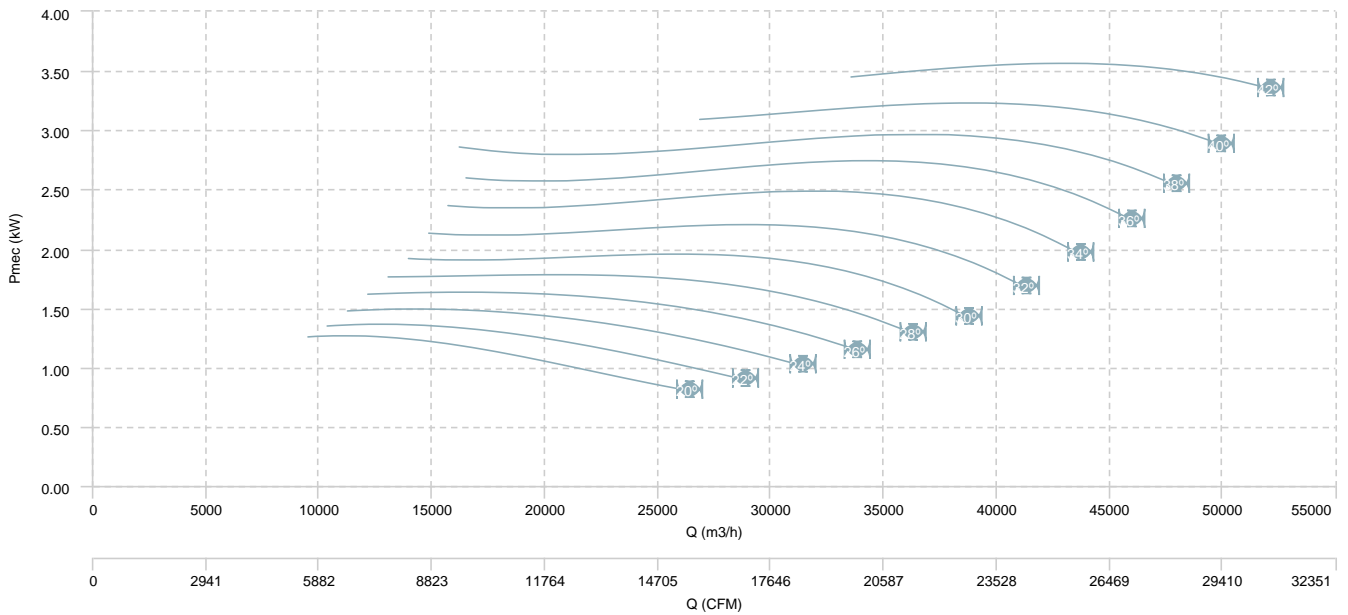


HBF 112 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (8 poles)**



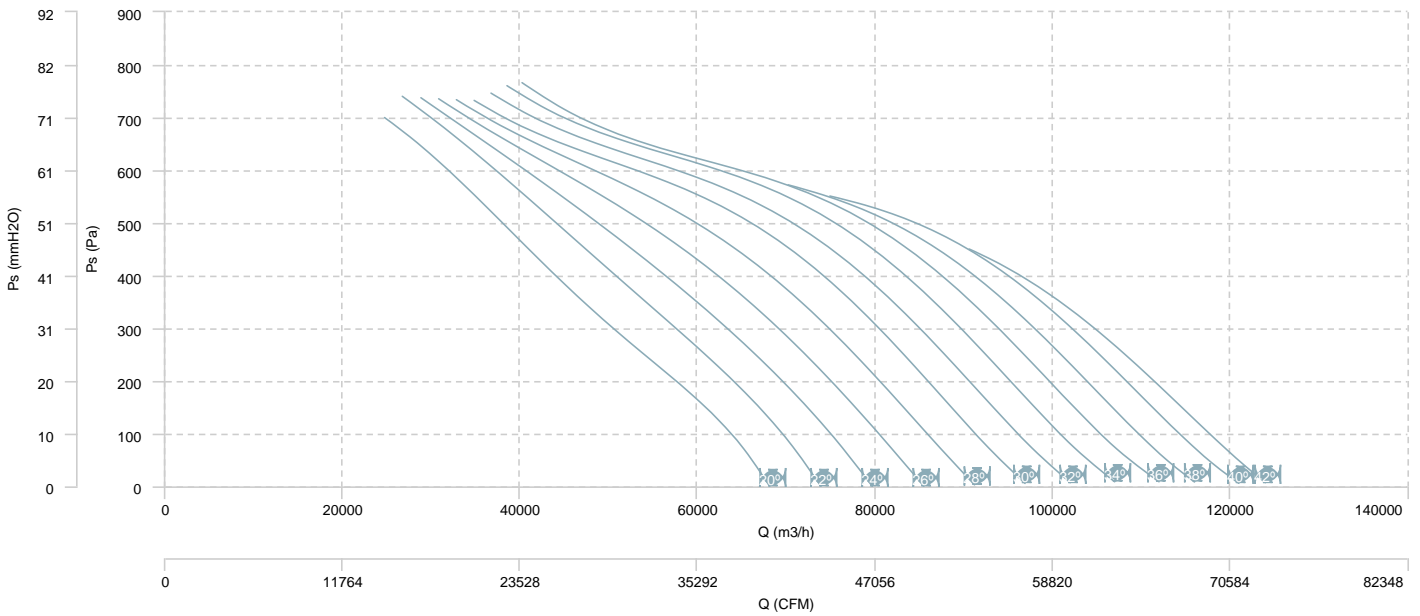
**AIR FLOW - MECHANICAL POWER (8 poles)**



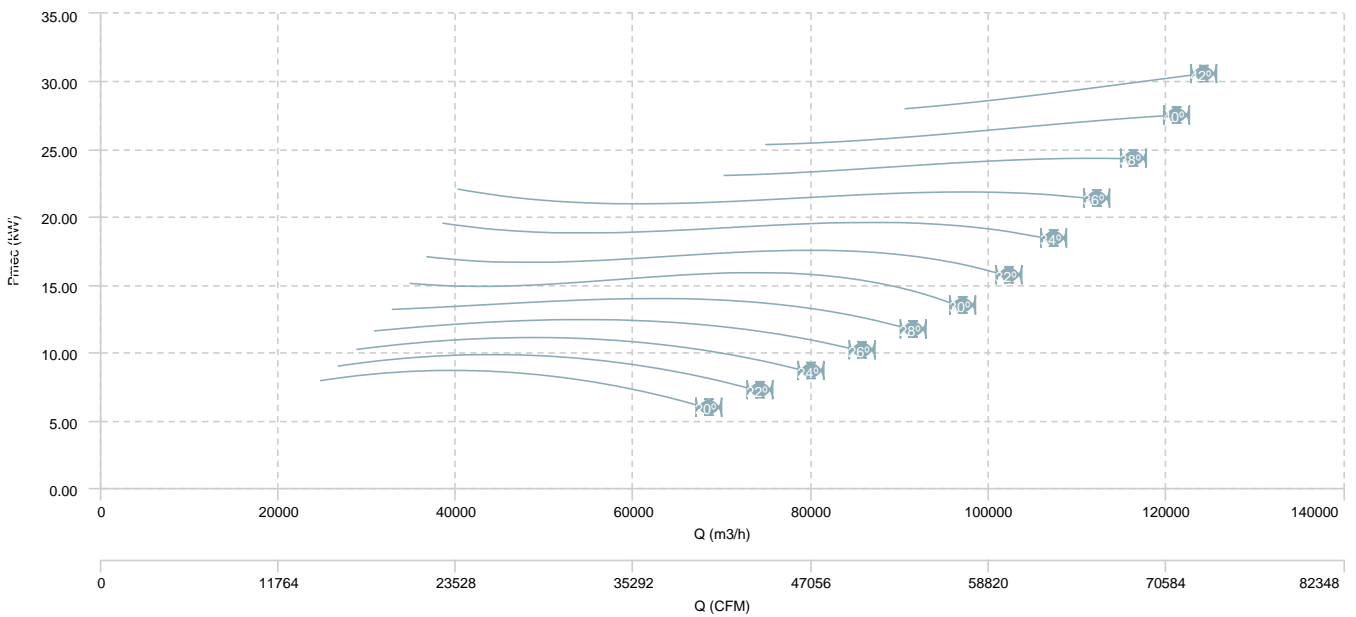


HBF 125 T4 (A3:4) F400

**AIR FLOW - PRESSURE**

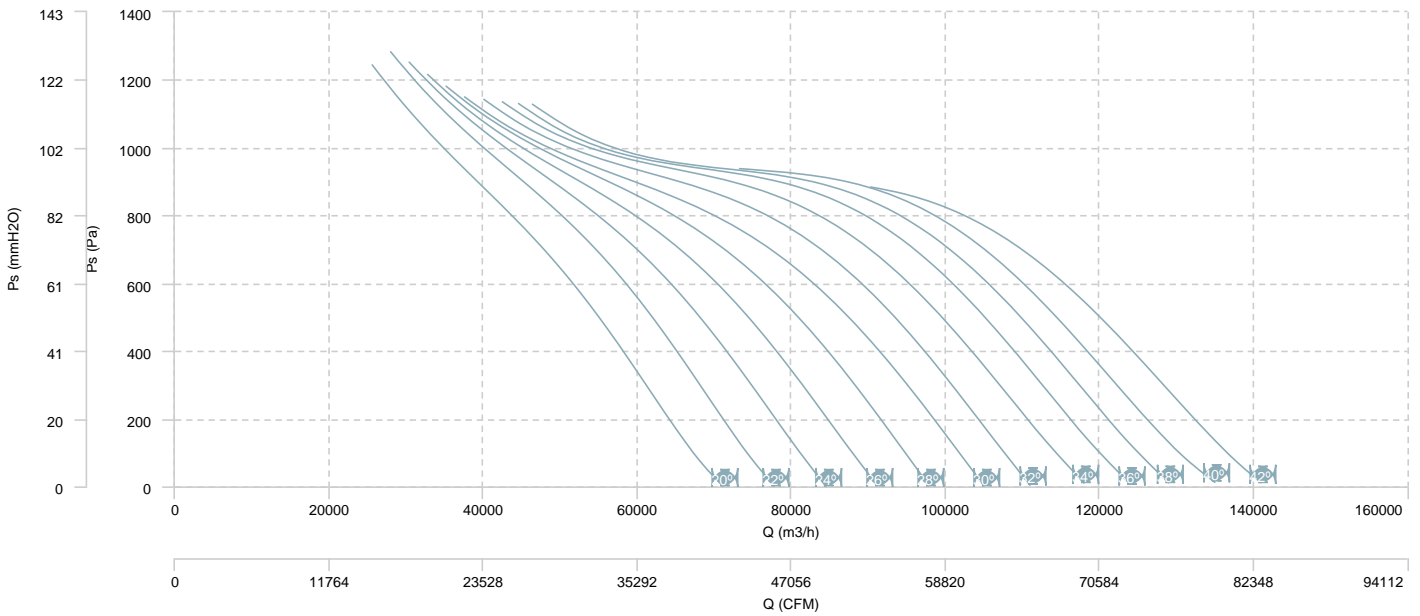


**AIR FLOW - MECHANICAL POWER**

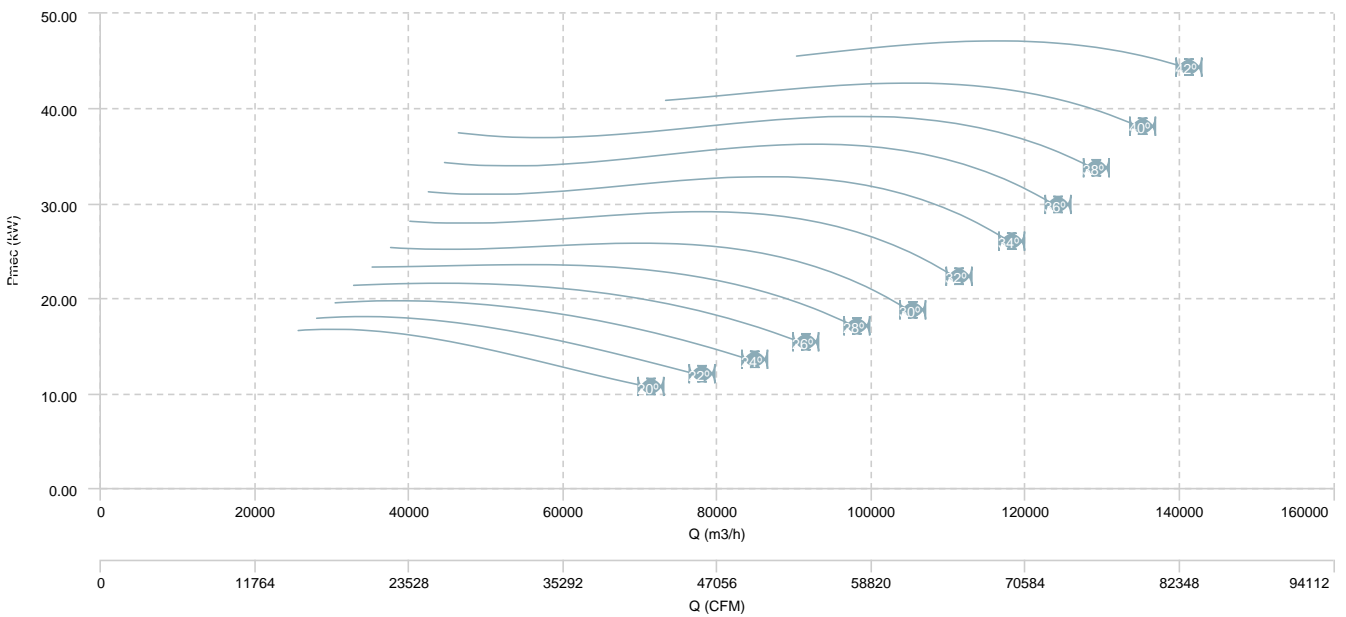


HBF 125 T4 (A3:8) F400

**AIR FLOW - PRESSURE**

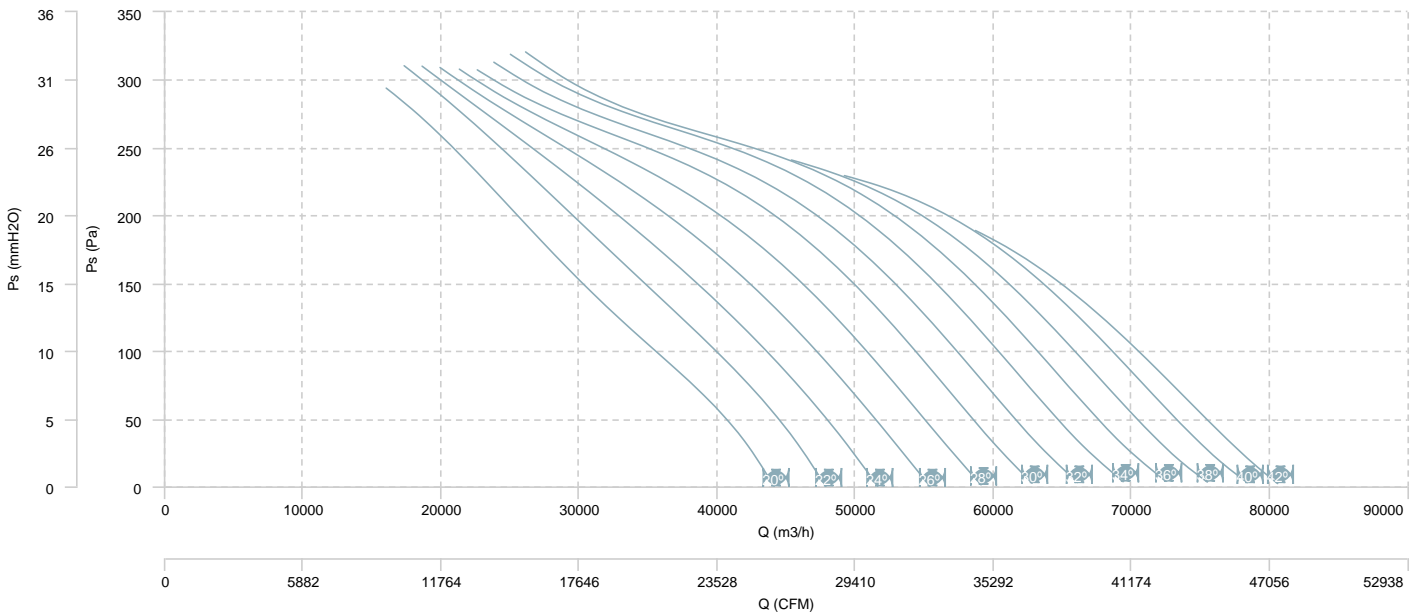


**AIR FLOW - MECHANICAL POWER**

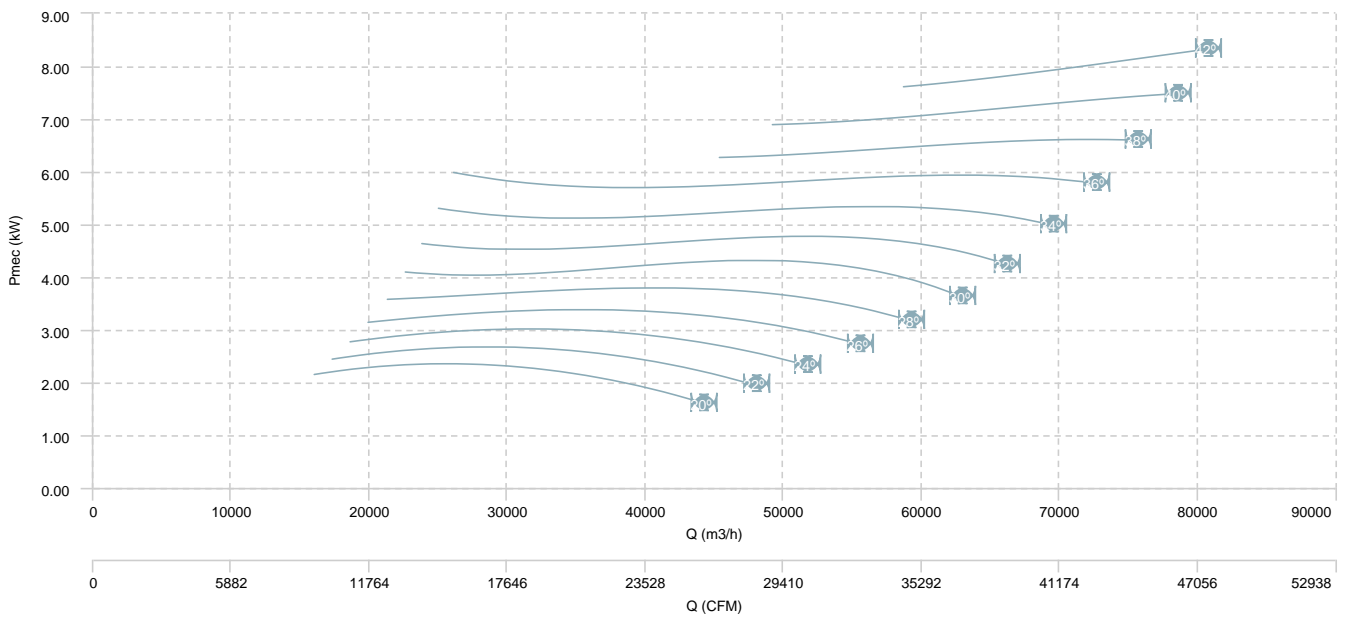


HBF 125 T6 (A3:4) F400

**AIR FLOW - PRESSURE**

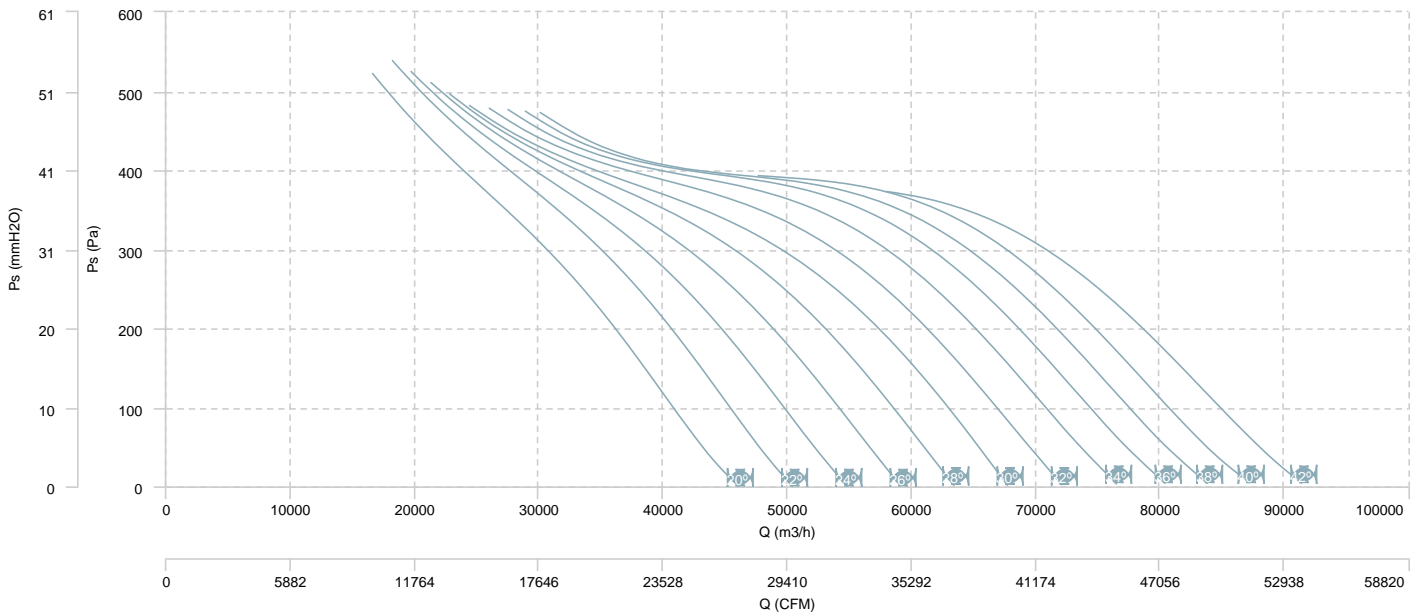


**AIR FLOW - MECHANICAL POWER**

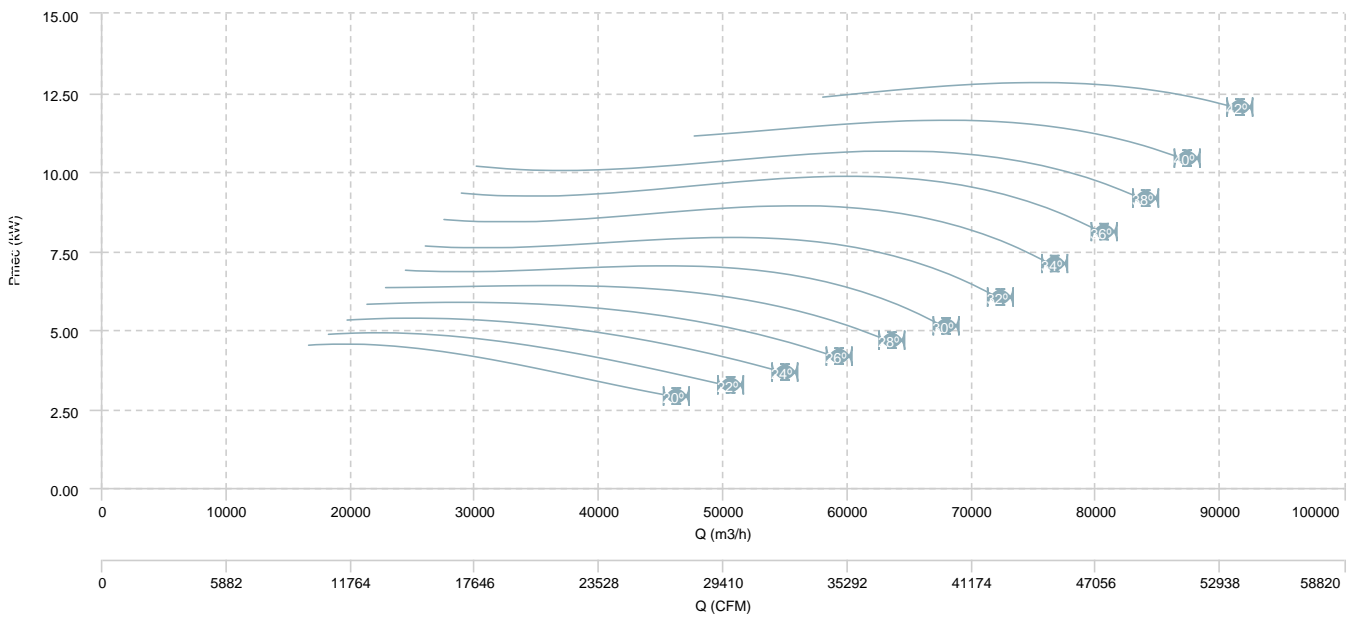


HBF 125 T6 (A3:8) F400

**AIR FLOW - PRESSURE**

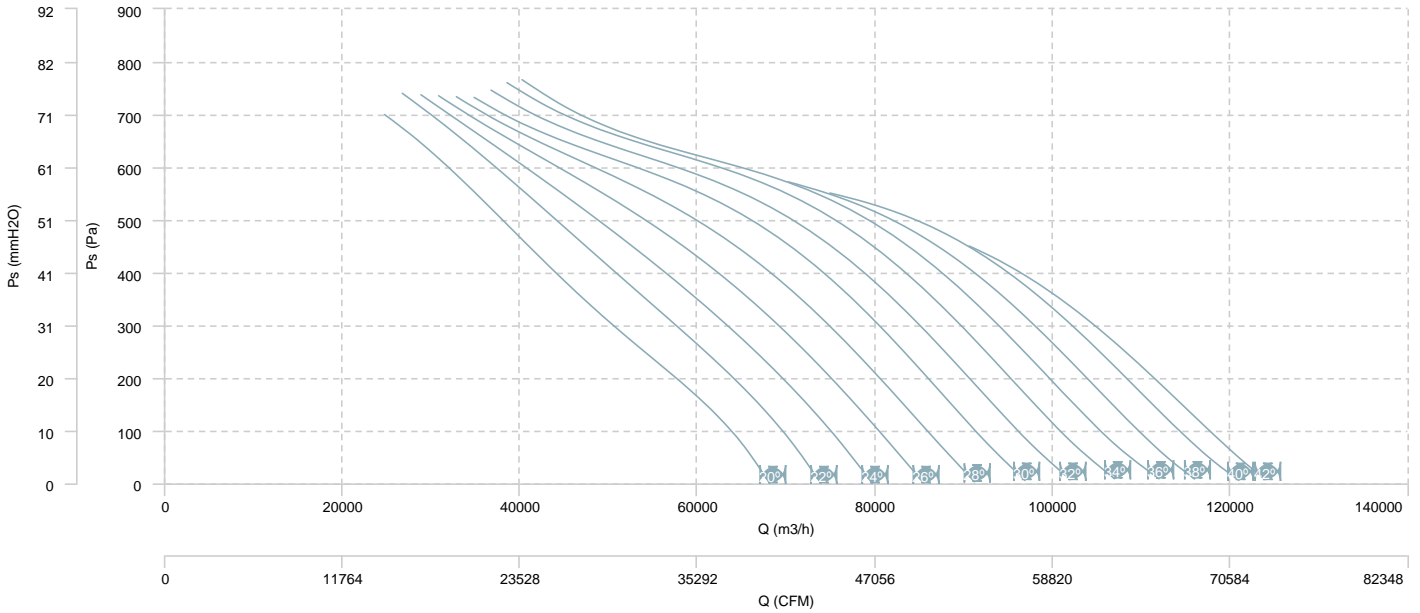


**AIR FLOW - MECHANICAL POWER**

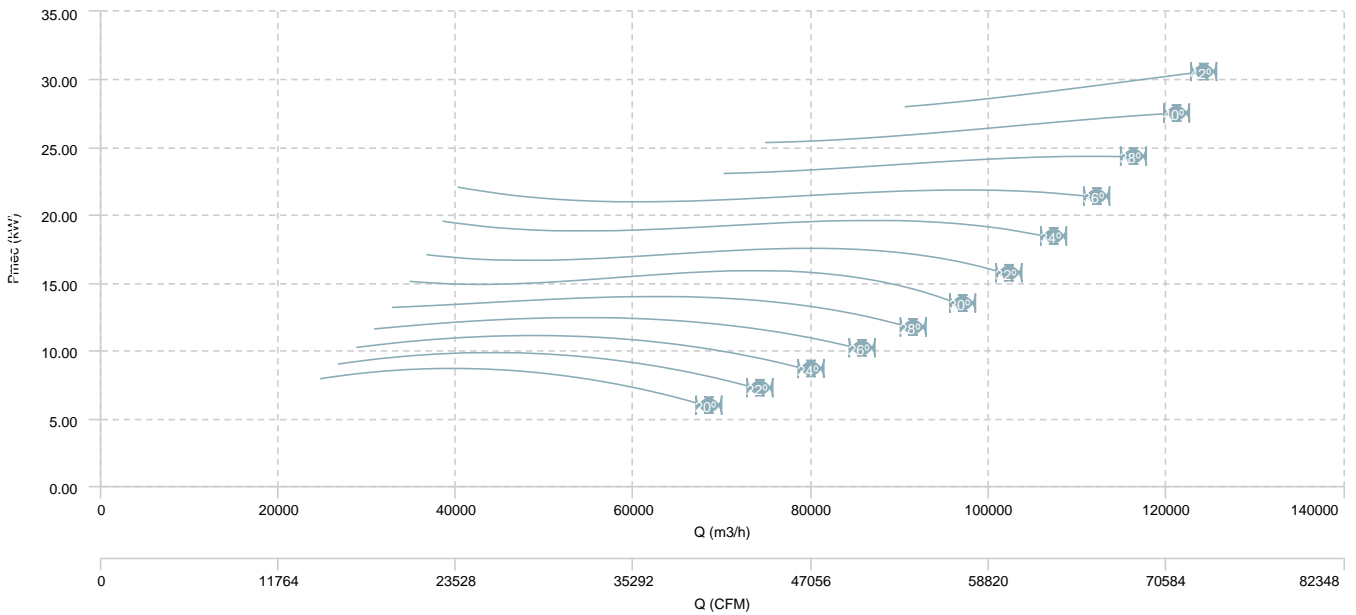


HBF 125 T4/T8 (A3:4) F400

**AIR FLOW - PRESSURE (4 poles)**

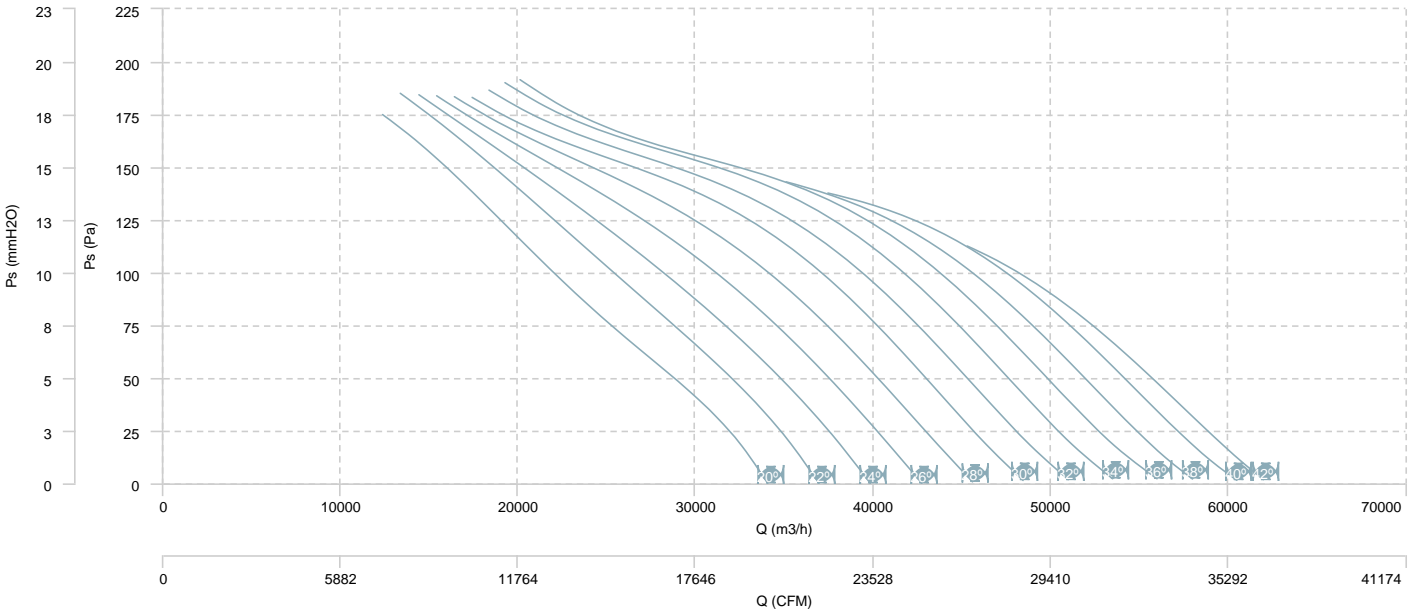


**AIR FLOW - MECHANICAL POWER (4 poles)**

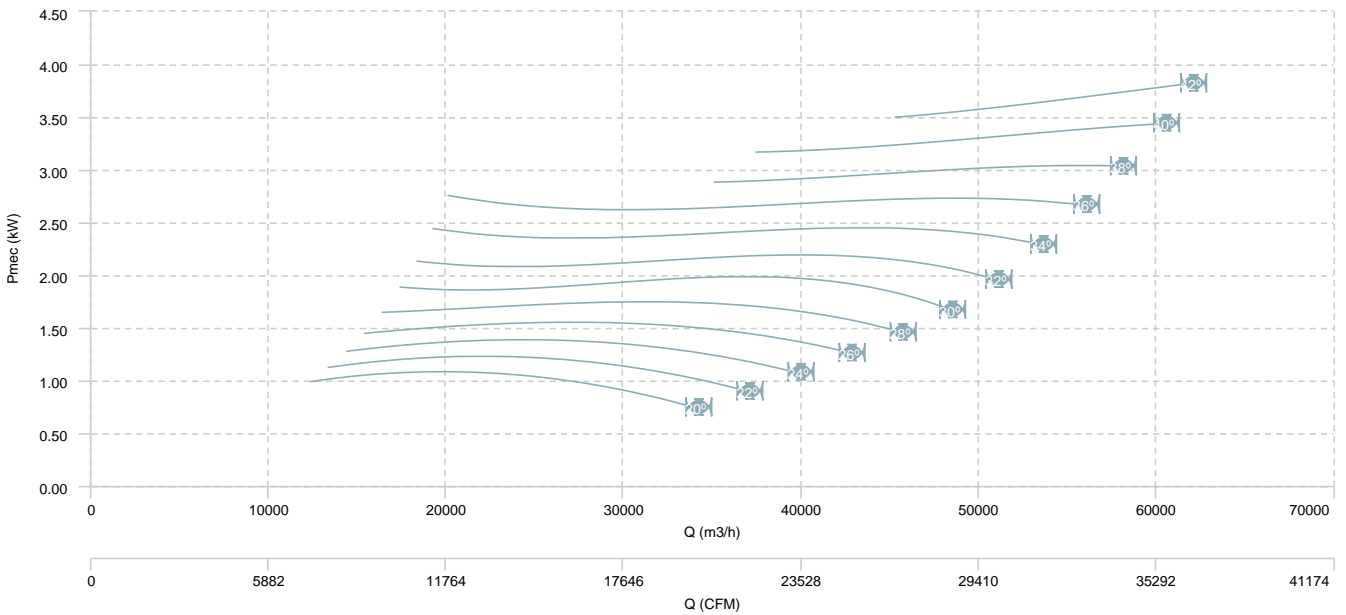


HBF 125 T4/T8 (A3:4) F400

AIR FLOW - PRESSURE (8 poles)

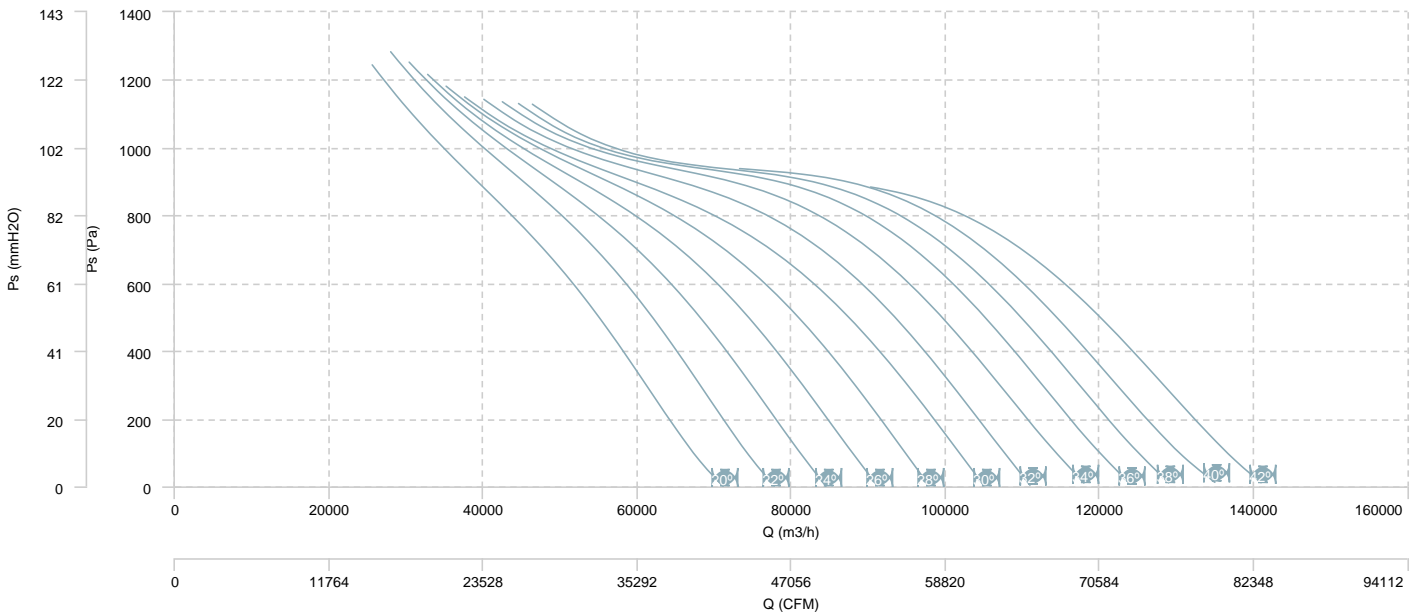


AIR FLOW - MECHANICAL POWER (8 poles)

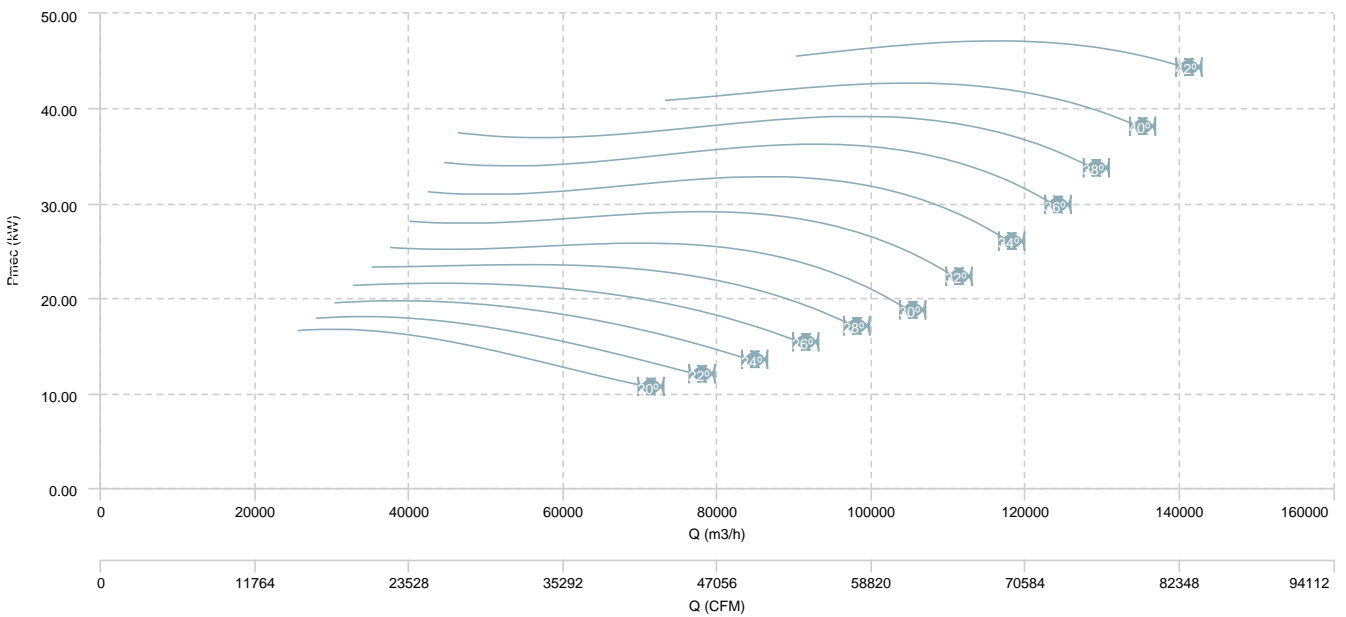


HBF 125 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (4 poles)**

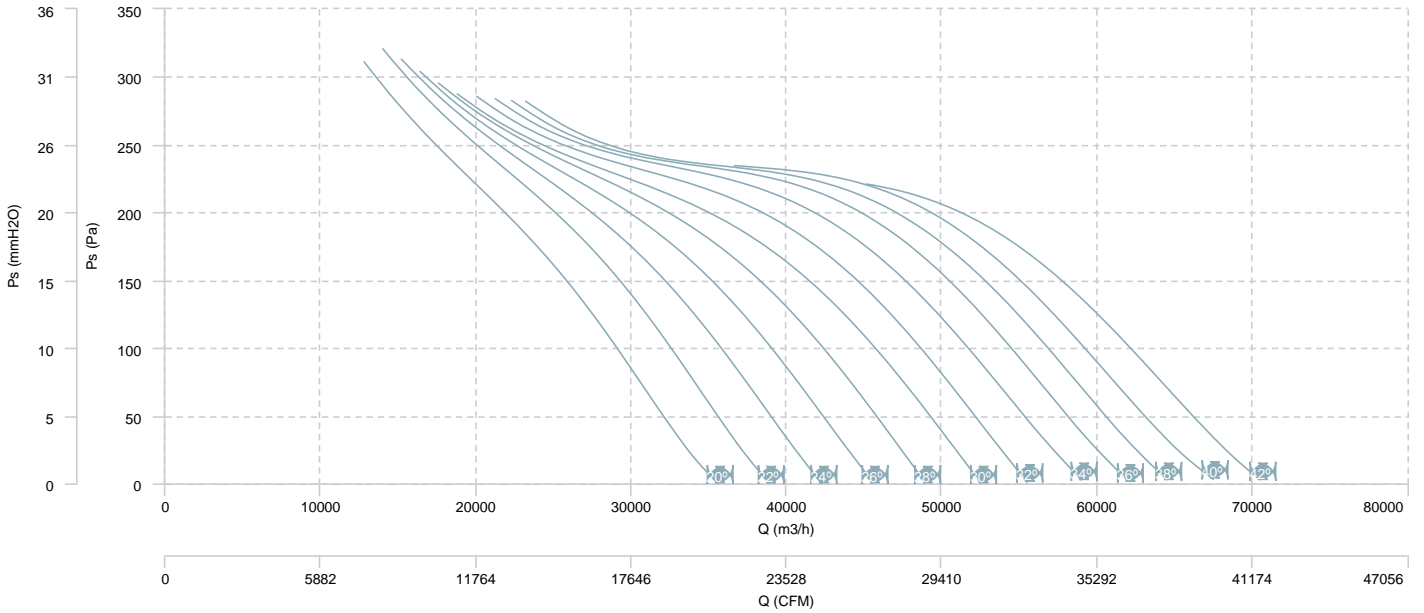


**AIR FLOW - MECHANICAL POWER (4 poles)**

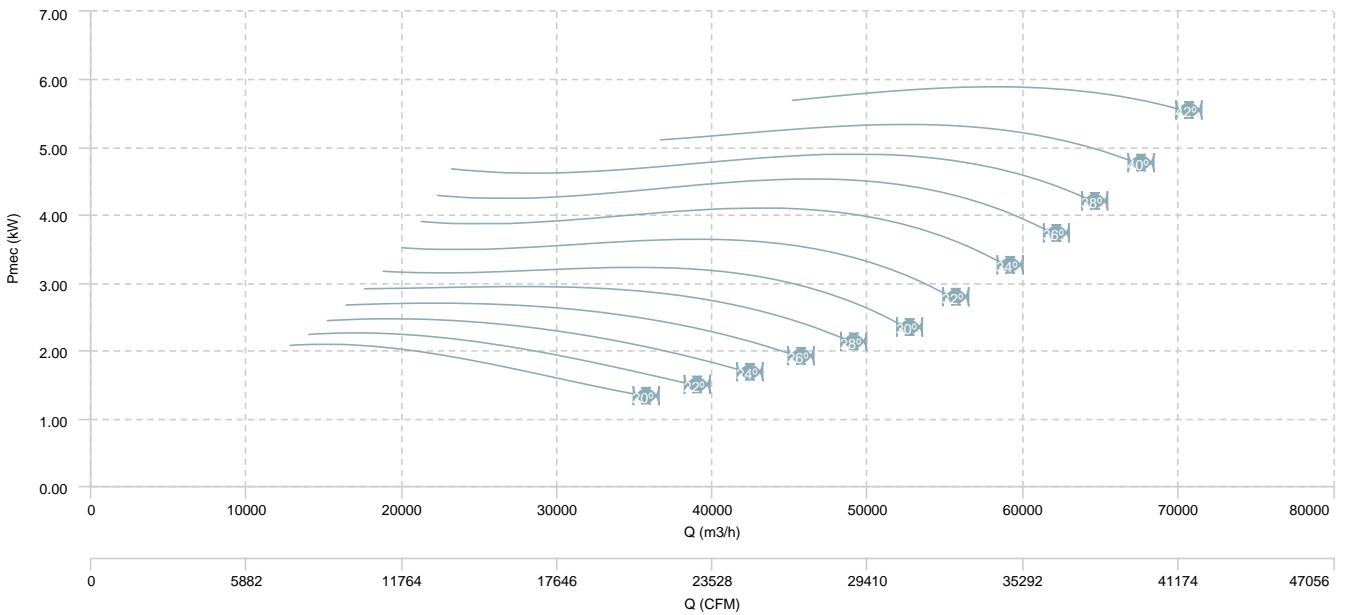


HBF 125 T4/T8 (A3:8) F400

**AIR FLOW - PRESSURE (8 poles)**



**AIR FLOW - MECHANICAL POWER (8 poles)**





## Sound data

### Sound / 4 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 45 T4 (A5:6) F400 (20 <sup>o</sup> )	Inlet	44	50	56	65	61	63	65	59	70
HBF 45 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	46	51	58	65	64	65	67	59	72
HBF 45 T4 (A5:6) F400 (27 <sup>o</sup> )	Inlet	47	52	59	65	65	66	67	59	72
HBF 45 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	49	54	61	65	67	68	69	60	74
HBF 45 T4 (A5:6) F400 (33 <sup>o</sup> )	Inlet	50	54	62	64	67	68	69	60	74
HBF 45 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	50	54	62	63	68	68	70	59	74
HBF 45 T4 (A5:6) F400 (37 <sup>o</sup> )	Inlet	52	55	64	65	69	69	71	61	76
HBF 45 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	53	57	65	67	70	70	72	63	77
HBF 45 T4 (A5:6) F400 (43 <sup>o</sup> )	Inlet	53	57	65	67	71	71	73	64	77
HBF 50 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	45	52	57	62	65	67	69	61	73
HBF 50 T4 (A5:6) F400 (27 <sup>o</sup> )	Inlet	46	53	58	63	66	68	70	62	74
HBF 50 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	48	53	60	64	67	68	71	62	75
HBF 50 T4 (A5:6) F400 (33 <sup>o</sup> )	Inlet	49	54	61	66	69	70	72	63	76
HBF 50 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	50	55	62	68	70	71	73	64	78
HBF 50 T4 (A5:6) F400 (37 <sup>o</sup> )	Inlet	50	57	62	68	70	71	73	64	78
HBF 50 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	50	57	62	68	70	71	73	64	78
HBF 50 T4 (A5:6) F400 (43 <sup>o</sup> )	Inlet	53	60	65	72	73	73	76	67	80
HBF 50 T4 (A5:6) F400 (45 <sup>o</sup> )	Inlet	53	60	65	73	74	74	76	68	81
HBF 56 T4 (A5:6) F400 (20 <sup>o</sup> )	Inlet	66	73	78	79	80	78	76	68	86
HBF 56 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	53	62	67	73	75	75	76	67	82
HBF 56 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	62	72	79	81	81	79	77	69	87
HBF 56 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	50	62	67	73	74	75	76	68	81
HBF 56 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	56	69	79	85	84	78	76	67	89
HBF 56 T4 (A5:6) F400 (45 <sup>o</sup> )	Inlet	60	73	88	94	91	80	76	67	96
HBF 63 T4 (A5:6) F400 (20 <sup>o</sup> )	Inlet	69	76	81	82	83	80	79	72	89
HBF 63 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	54	63	68	73	77	76	76	70	83
HBF 63 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	57	65	75	82	80	79	79	72	87
HBF 63 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	53	65	70	74	78	77	79	72	84
HBF 63 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	54	66	77	89	86	81	79	71	92
HBF 63 T4 (A5:6) F400 (45 <sup>o</sup> )	Inlet	55	66	82	100	92	84	79	71	100
HBF 71 T4 (A5:6) F400 (20 <sup>o</sup> )	Inlet	71	78	83	85	85	83	82	75	92
HBF 71 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	58	68	74	78	81	82	82	73	88
HBF 71 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	60	68	75	81	82	81	81	72	87
HBF 71 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	53	65	70	75	78	79	80	71	84
HBF 71 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	57	68	83	92	88	83	81	72	95

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 71 T4 (A5:6) F400 (45 <sup>o</sup> )	Inlet	61	70	92	105	96	87	83	72	105
HBF 80 T4 (A5:6) F400 (20 <sup>o</sup> )	Inlet	74	81	86	88	88	86	85	78	94
HBF 80 T4 (A5:6) F400 (25 <sup>o</sup> )	Inlet	61	68	74	79	81	81	82	74	88
HBF 80 T4 (A5:6) F400 (30 <sup>o</sup> )	Inlet	61	72	79	89	87	85	85	77	93
HBF 80 T4 (A5:6) F400 (35 <sup>o</sup> )	Inlet	58	70	76	84	89	87	87	78	94
HBF 80 T4 (A5:6) F400 (40 <sup>o</sup> )	Inlet	59	72	88	93	90	86	84	76	97
HBF 80 T4 (A5:6) F400 (45 <sup>o</sup> )	Inlet	60	74	97	100	91	86	82	75	102
HBF 90 T4 (A3:4) F400 (20 <sup>o</sup> )	Inlet	83	84	82	87	88	87	85	79	94
HBF 90 T4 (A3:4) F400 (22 <sup>o</sup> )	Inlet	87	85	83	86	87	86	85	78	94
HBF 90 T4 (A3:4) F400 (24 <sup>o</sup> )	Inlet	89	86	84	86	86	85	84	78	95
HBF 90 T4 (A3:4) F400 (26 <sup>o</sup> )	Inlet	90	87	85	86	85	84	83	77	95
HBF 90 T4 (A3:4) F400 (28 <sup>o</sup> )	Inlet	91	88	86	86	84	83	83	77	95
HBF 90 T4 (A3:4) F400 (30 <sup>o</sup> )	Inlet	92	89	87	86	83	82	82	76	96
HBF 90 T4 (A3:4) F400 (32 <sup>o</sup> )	Inlet	92	89	87	85	83	82	82	76	96
HBF 90 T4 (A3:4) F400 (34 <sup>o</sup> )	Inlet	91	88	86	84	83	83	81	75	95
HBF 90 T4 (A3:4) F400 (36 <sup>o</sup> )	Inlet	92	89	87	84	84	83	81	75	96
HBF 90 T4 (A3:4) F400 (38 <sup>o</sup> )	Inlet	93	90	88	85	85	83	82	77	97
HBF 90 T4 (A3:4) F400 (40 <sup>o</sup> )	Inlet	94	91	89	86	87	84	83	78	98
HBF 90 T4 (A3:4) F400 (42 <sup>o</sup> )	Inlet	95	92	90	87	88	85	84	79	99
HBF 90 T4 (A3:8) F400 (20 <sup>o</sup> )	Inlet	95	97	99	94	93	86	87	79	104
HBF 90 T4 (A3:8) F400 (22 <sup>o</sup> )	Inlet	95	96	97	93	92	86	87	79	103
HBF 90 T4 (A3:8) F400 (24 <sup>o</sup> )	Inlet	95	95	95	92	91	87	87	79	102
HBF 90 T4 (A3:8) F400 (26 <sup>o</sup> )	Inlet	96	94	93	91	90	87	87	80	101
HBF 90 T4 (A3:8) F400 (28 <sup>o</sup> )	Inlet	96	92	91	90	89	87	86	80	100
HBF 90 T4 (A3:8) F400 (30 <sup>o</sup> )	Inlet	94	91	89	89	88	87	86	80	99
HBF 90 T4 (A3:8) F400 (32 <sup>o</sup> )	Inlet	93	90	88	88	87	86	85	79	98
HBF 90 T4 (A3:8) F400 (34 <sup>o</sup> )	Inlet	93	90	88	87	87	86	84	78	97
HBF 90 T4 (A3:8) F400 (36 <sup>o</sup> )	Inlet	93	90	88	86	87	86	84	78	97
HBF 90 T4 (A3:8) F400 (38 <sup>o</sup> )	Inlet	95	92	90	87	87	86	83	78	99
HBF 90 T4 (A3:8) F400 (40 <sup>o</sup> )	Inlet	97	94	92	87	88	86	83	79	100
HBF 90 T4 (A3:8) F400 (42 <sup>o</sup> )	Inlet	97	94	92	88	88	87	84	79	101
HBF 100 T4 (A3:4) F400 (20 <sup>o</sup> )	Inlet	66	76	81	88	91	92	93	90	98
HBF 100 T4 (A3:4) F400 (22 <sup>o</sup> )	Inlet	66	76	82	88	91	92	93	90	98
HBF 100 T4 (A3:4) F400 (24 <sup>o</sup> )	Inlet	67	76	81	87	91	92	93	89	98
HBF 100 T4 (A3:4) F400 (26 <sup>o</sup> )	Inlet	67	75	81	87	90	91	93	88	97
HBF 100 T4 (A3:4) F400 (28 <sup>o</sup> )	Inlet	67	75	81	86	90	91	93	87	97
HBF 100 T4 (A3:4) F400 (30 <sup>o</sup> )	Inlet	68	74	81	86	90	91	93	86	97
HBF 100 T4 (A3:4) F400 (32 <sup>o</sup> )	Inlet	68	74	81	86	89	90	92	86	96
HBF 100 T4 (A3:4) F400 (34 <sup>o</sup> )	Inlet	69	73	81	85	88	90	91	85	96

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 100 T4 (A3:4) F400 (36º)	Inlet	69	73	81	86	88	90	91	85	96	
HBF 100 T4 (A3:4) F400 (38º)	Inlet	68	74	81	86	89	90	92	85	96	
HBF 100 T4 (A3:4) F400 (40º)	Inlet	68	75	81	87	90	91	92	86	97	
HBF 100 T4 (A3:4) F400 (42º)	Inlet	69	77	83	88	92	92	93	87	98	
HBF 100 T4 (A3:8) F400 (20º)	Inlet	72	81	92	102	100	99	100	95	107	
HBF 100 T4 (A3:8) F400 (22º)	Inlet	72	80	91	100	99	98	99	94	106	
HBF 100 T4 (A3:8) F400 (24º)	Inlet	72	79	89	97	97	97	98	93	104	
HBF 100 T4 (A3:8) F400 (26º)	Inlet	72	79	88	95	96	96	97	92	103	
HBF 100 T4 (A3:8) F400 (28º)	Inlet	72	79	87	93	96	95	96	91	102	
HBF 100 T4 (A3:8) F400 (30º)	Inlet	72	79	86	91	95	95	96	90	101	
HBF 100 T4 (A3:8) F400 (32º)	Inlet	71	79	84	90	93	94	95	89	100	
HBF 100 T4 (A3:8) F400 (34º)	Inlet	71	78	83	88	92	93	94	88	99	
HBF 100 T4 (A3:8) F400 (36º)	Inlet	70	77	82	87	91	93	94	87	99	
HBF 100 T4 (A3:8) F400 (38º)	Inlet	71	78	83	88	92	94	94	88	99	
HBF 100 T4 (A3:8) F400 (40º)	Inlet	71	79	84	89	92	94	95	89	100	
HBF 100 T4 (A3:8) F400 (42º)	Inlet	72	79	84	89	93	94	95	89	100	
HBF 112 T4 (A3:4) F400 (20º)	Inlet	66	78	83	90	94	94	96	92	101	
HBF 112 T4 (A3:4) F400 (22º)	Inlet	68	79	84	90	94	95	96	92	102	
HBF 112 T4 (A3:4) F400 (24º)	Inlet	69	78	83	90	93	94	96	91	101	
HBF 112 T4 (A3:4) F400 (26º)	Inlet	70	78	83	89	93	94	95	90	100	
HBF 112 T4 (A3:4) F400 (28º)	Inlet	71	78	83	89	92	93	95	89	99	
HBF 112 T4 (A3:4) F400 (30º)	Inlet	71	78	83	88	92	93	94	88	99	
HBF 112 T4 (A3:4) F400 (32º)	Inlet	70	77	82	88	91	92	94	87	98	
HBF 112 T4 (A3:4) F400 (34º)	Inlet	70	76	82	87	90	92	93	86	98	
HBF 112 T4 (A3:4) F400 (36º)	Inlet	71	76	83	87	90	92	93	86	98	
HBF 112 T4 (A3:4) F400 (38º)	Inlet	71	77	83	88	91	92	93	87	98	
HBF 112 T4 (A3:4) F400 (40º)	Inlet	72	79	84	89	91	93	94	87	99	
HBF 112 T4 (A3:4) F400 (42º)	Inlet	72	79	84	89	92	94	94	88	99	
HBF 112 T4 (A3:8) F400 (20º)	Inlet	73	82	92	101	101	103	103	97	109	
HBF 112 T4 (A3:8) F400 (22º)	Inlet	73	81	91	99	100	102	102	96	107	
HBF 112 T4 (A3:8) F400 (24º)	Inlet	73	81	90	97	99	101	101	95	106	
HBF 112 T4 (A3:8) F400 (26º)	Inlet	74	81	89	96	98	100	100	94	106	
HBF 112 T4 (A3:8) F400 (28º)	Inlet	74	81	88	94	98	99	99	94	105	
HBF 112 T4 (A3:8) F400 (30º)	Inlet	74	80	87	93	97	99	99	93	104	
HBF 112 T4 (A3:8) F400 (32º)	Inlet	74	81	86	91	96	97	97	91	103	
HBF 112 T4 (A3:8) F400 (34º)	Inlet	73	80	85	90	94	96	96	89	101	
HBF 112 T4 (A3:8) F400 (36º)	Inlet	73	80	85	90	93	95	95	89	101	
HBF 112 T4 (A3:8) F400 (38º)	Inlet	73	80	85	90	94	96	95	89	101	
HBF 112 T4 (A3:8) F400 (40º)	Inlet	74	81	86	90	94	96	95	90	102	

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 112 T4 (A3:8) F400 (42 <sup>º</sup> )	Inlet	73	80	85	91	94	96	95	89	101	
HBF 125 T4 (A3:4) F400 (20 <sup>º</sup> )	Inlet	72	85	90	98	102	102	104	101	109	
HBF 125 T4 (A3:4) F400 (22 <sup>º</sup> )	Inlet	75	86	91	98	102	103	105	101	109	
HBF 125 T4 (A3:4) F400 (24 <sup>º</sup> )	Inlet	75	85	90	96	100	101	103	98	107	
HBF 125 T4 (A3:4) F400 (26 <sup>º</sup> )	Inlet	76	84	89	94	98	99	101	96	106	
HBF 125 T4 (A3:4) F400 (28 <sup>º</sup> )	Inlet	75	82	87	93	96	98	99	93	104	
HBF 125 T4 (A3:4) F400 (30 <sup>º</sup> )	Inlet	74	81	86	91	95	96	97	91	102	
HBF 125 T4 (A3:4) F400 (32 <sup>º</sup> )	Inlet	74	81	86	90	94	96	96	90	102	
HBF 125 T4 (A3:4) F400 (34 <sup>º</sup> )	Inlet	73	80	85	90	93	95	96	88	101	
HBF 125 T4 (A3:4) F400 (36 <sup>º</sup> )	Inlet	74	81	86	90	93	95	96	88	101	
HBF 125 T4 (A3:4) F400 (38 <sup>º</sup> )	Inlet	74	81	86	91	93	95	96	89	101	
HBF 125 T4 (A3:4) F400 (40 <sup>º</sup> )	Inlet	75	82	87	91	93	96	96	89	102	
HBF 125 T4 (A3:4) F400 (42 <sup>º</sup> )	Inlet	75	82	87	92	94	96	96	90	102	
HBF 125 T4 (A3:8) F400 (20 <sup>º</sup> )	Inlet	78	86	93	103	108	111	110	105	115	
HBF 125 T4 (A3:8) F400 (22 <sup>º</sup> )	Inlet	79	86	93	102	107	110	109	104	114	
HBF 125 T4 (A3:8) F400 (24 <sup>º</sup> )	Inlet	78	85	92	100	106	108	108	102	113	
HBF 125 T4 (A3:8) F400 (26 <sup>º</sup> )	Inlet	78	85	91	98	104	106	106	100	111	
HBF 125 T4 (A3:8) F400 (28 <sup>º</sup> )	Inlet	78	84	91	97	102	105	105	98	110	
HBF 125 T4 (A3:8) F400 (30 <sup>º</sup> )	Inlet	77	83	90	96	101	103	104	97	108	
HBF 125 T4 (A3:8) F400 (32 <sup>º</sup> )	Inlet	77	83	89	95	99	102	102	94	107	
HBF 125 T4 (A3:8) F400 (34 <sup>º</sup> )	Inlet	77	83	89	94	97	99	100	92	105	
HBF 125 T4 (A3:8) F400 (36 <sup>º</sup> )	Inlet	77	83	89	93	96	98	98	91	104	
HBF 125 T4 (A3:8) F400 (38 <sup>º</sup> )	Inlet	76	83	88	93	96	98	97	91	104	
HBF 125 T4 (A3:8) F400 (40 <sup>º</sup> )	Inlet	76	83	88	93	96	98	97	90	103	
HBF 125 T4 (A3:8) F400 (42 <sup>º</sup> )	Inlet	76	83	88	93	96	98	96	90	103	

## Sound / 6 poles

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 45 T6 (A5:6) F400 (25 <sup>º</sup> )	Inlet	37	42	49	55	54	55	57	50	62	
HBF 45 T6 (A5:6) F400 (27 <sup>º</sup> )	Inlet	38	43	50	55	55	56	58	50	63	
HBF 45 T6 (A5:6) F400 (30 <sup>º</sup> )	Inlet	40	44	52	55	57	58	59	50	64	
HBF 45 T6 (A5:6) F400 (33 <sup>º</sup> )	Inlet	40	44	52	55	58	58	60	50	65	
HBF 45 T6 (A5:6) F400 (35 <sup>º</sup> )	Inlet	41	45	53	54	59	59	60	50	65	
HBF 45 T6 (A5:6) F400 (37 <sup>º</sup> )	Inlet	42	46	54	56	60	60	61	52	66	
HBF 45 T6 (A5:6) F400 (40 <sup>º</sup> )	Inlet	44	47	56	57	61	61	63	54	67	
HBF 45 T6 (A5:6) F400 (43 <sup>º</sup> )	Inlet	43	47	55	58	62	62	63	55	68	

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 45 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	43	47	55	58	62	62	63	55	68
HBF 50 T6 (A5:6) F400 (25 <sup>o</sup> )	Inlet	36	43	48	53	55	58	60	52	64
HBF 50 T6 (A5:6) F400 (27 <sup>o</sup> )	Inlet	37	43	49	53	56	58	61	52	64
HBF 50 T6 (A5:6) F400 (30 <sup>o</sup> )	Inlet	39	44	51	55	58	59	62	53	66
HBF 50 T6 (A5:6) F400 (33 <sup>o</sup> )	Inlet	40	45	52	57	59	60	63	54	67
HBF 50 T6 (A5:6) F400 (35 <sup>o</sup> )	Inlet	40	45	52	59	61	62	64	55	68
HBF 50 T6 (A5:6) F400 (37 <sup>o</sup> )	Inlet	41	48	53	59	61	62	64	55	68
HBF 50 T6 (A5:6) F400 (40 <sup>o</sup> )	Inlet	41	48	53	59	61	62	64	55	68
HBF 50 T6 (A5:6) F400 (43 <sup>o</sup> )	Inlet	43	50	55	62	63	64	66	58	71
HBF 50 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	44	51	56	64	65	65	67	59	72
HBF 56 T6 (A5:6) F400 (20 <sup>o</sup> )	Inlet	63	70	75	76	77	75	73	65	82
HBF 56 T6 (A5:6) F400 (25 <sup>o</sup> )	Inlet	50	59	64	70	72	72	73	64	78
HBF 56 T6 (A5:6) F400 (30 <sup>o</sup> )	Inlet	58	68	75	77	78	76	74	66	83
HBF 56 T6 (A5:6) F400 (35 <sup>o</sup> )	Inlet	47	58	63	69	70	71	72	64	78
HBF 56 T6 (A5:6) F400 (40 <sup>o</sup> )	Inlet	53	66	76	81	81	75	73	64	85
HBF 56 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	57	69	84	90	88	77	73	63	93
HBF 63 T6 (A5:6) F400 (20 <sup>o</sup> )	Inlet	66	73	78	79	80	77	76	69	85
HBF 63 T6 (A5:6) F400 (25 <sup>o</sup> )	Inlet	51	60	65	70	74	73	73	67	79
HBF 63 T6 (A5:6) F400 (30 <sup>o</sup> )	Inlet	54	62	72	79	77	76	76	69	83
HBF 63 T6 (A5:6) F400 (35 <sup>o</sup> )	Inlet	50	62	67	71	75	74	76	69	81
HBF 63 T6 (A5:6) F400 (40 <sup>o</sup> )	Inlet	51	63	74	86	83	78	76	68	88
HBF 63 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	52	63	79	96	88	81	76	67	97
HBF 71 T6 (A5:6) F400 (20 <sup>o</sup> )	Inlet	68	75	80	82	82	80	79	72	88
HBF 71 T6 (A5:6) F400 (25 <sup>o</sup> )	Inlet	55	65	71	75	78	79	79	70	84
HBF 71 T6 (A5:6) F400 (30 <sup>o</sup> )	Inlet	57	65	71	77	78	78	77	68	84
HBF 71 T6 (A5:6) F400 (35 <sup>o</sup> )	Inlet	49	61	66	71	74	75	76	67	81
HBF 71 T6 (A5:6) F400 (40 <sup>o</sup> )	Inlet	54	64	79	89	85	80	78	68	91
HBF 71 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	57	66	88	101	92	83	79	69	102
HBF 80 T6 (A5:6) F400 (20 <sup>o</sup> )	Inlet	71	78	83	85	85	83	82	75	91
HBF 80 T6 (A5:6) F400 (25 <sup>o</sup> )	Inlet	58	65	71	76	78	78	79	71	84
HBF 80 T6 (A5:6) F400 (30 <sup>o</sup> )	Inlet	58	69	76	86	84	82	82	74	90
HBF 80 T6 (A5:6) F400 (35 <sup>o</sup> )	Inlet	55	67	73	81	86	84	84	75	90
HBF 80 T6 (A5:6) F400 (40 <sup>o</sup> )	Inlet	56	69	85	90	87	83	81	73	93
HBF 80 T6 (A5:6) F400 (45 <sup>o</sup> )	Inlet	56	70	93	96	87	82	79	71	98
HBF 90 T6 (A3:4) F400 (20 <sup>o</sup> )	Inlet	73	74	72	77	78	77	76	70	85
HBF 90 T6 (A3:4) F400 (22 <sup>o</sup> )	Inlet	77	76	74	77	77	76	75	69	85
HBF 90 T6 (A3:4) F400 (24 <sup>o</sup> )	Inlet	80	77	75	77	76	75	75	68	85
HBF 90 T6 (A3:4) F400 (26 <sup>o</sup> )	Inlet	81	78	76	77	75	74	74	68	85
HBF 90 T6 (A3:4) F400 (28 <sup>o</sup> )	Inlet	82	79	77	76	74	73	73	67	86

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 90 T6 (A3:4) F400 (30 <sup>o</sup> )	Inlet	83	80	78	76	73	72	73	67	87
HBF 90 T6 (A3:4) F400 (32 <sup>o</sup> )	Inlet	83	80	78	76	74	73	72	66	86
HBF 90 T6 (A3:4) F400 (34 <sup>o</sup> )	Inlet	82	79	77	75	74	73	72	66	86
HBF 90 T6 (A3:4) F400 (36 <sup>o</sup> )	Inlet	82	79	77	75	75	74	72	66	86
HBF 90 T6 (A3:4) F400 (38 <sup>o</sup> )	Inlet	84	81	79	76	76	74	73	67	87
HBF 90 T6 (A3:4) F400 (40 <sup>o</sup> )	Inlet	85	82	80	76	77	74	73	68	88
HBF 90 T6 (A3:4) F400 (42 <sup>o</sup> )	Inlet	86	83	81	77	79	75	74	69	89
HBF 90 T6 (A3:8) F400 (20 <sup>o</sup> )	Inlet	86	88	90	85	84	77	78	70	94
HBF 90 T6 (A3:8) F400 (22 <sup>o</sup> )	Inlet	86	87	88	84	83	77	78	70	93
HBF 90 T6 (A3:8) F400 (24 <sup>o</sup> )	Inlet	86	85	86	83	82	77	77	70	92
HBF 90 T6 (A3:8) F400 (26 <sup>o</sup> )	Inlet	86	84	84	82	81	77	77	70	91
HBF 90 T6 (A3:8) F400 (28 <sup>o</sup> )	Inlet	86	83	82	81	80	77	77	71	90
HBF 90 T6 (A3:8) F400 (30 <sup>o</sup> )	Inlet	85	82	80	80	79	78	77	71	89
HBF 90 T6 (A3:8) F400 (32 <sup>o</sup> )	Inlet	84	81	79	79	78	77	76	70	88
HBF 90 T6 (A3:8) F400 (34 <sup>o</sup> )	Inlet	83	80	78	77	77	77	75	69	88
HBF 90 T6 (A3:8) F400 (36 <sup>o</sup> )	Inlet	84	81	79	77	77	76	74	69	88
HBF 90 T6 (A3:8) F400 (38 <sup>o</sup> )	Inlet	85	82	80	77	78	77	74	69	89
HBF 90 T6 (A3:8) F400 (40 <sup>o</sup> )	Inlet	87	84	82	78	79	77	74	69	91
HBF 90 T6 (A3:8) F400 (42 <sup>o</sup> )	Inlet	87	84	82	78	79	77	74	69	91
HBF 100 T6 (A3:4) F400 (20 <sup>o</sup> )	Inlet	56	67	72	78	82	83	84	81	89
HBF 100 T6 (A3:4) F400 (22 <sup>o</sup> )	Inlet	57	67	72	78	82	83	84	80	89
HBF 100 T6 (A3:4) F400 (24 <sup>o</sup> )	Inlet	57	66	72	78	82	82	84	79	89
HBF 100 T6 (A3:4) F400 (26 <sup>o</sup> )	Inlet	57	66	71	77	81	82	83	78	88
HBF 100 T6 (A3:4) F400 (28 <sup>o</sup> )	Inlet	58	65	71	77	81	81	83	78	88
HBF 100 T6 (A3:4) F400 (30 <sup>o</sup> )	Inlet	58	65	71	77	80	81	83	77	87
HBF 100 T6 (A3:4) F400 (32 <sup>o</sup> )	Inlet	59	64	71	76	79	81	83	76	87
HBF 100 T6 (A3:4) F400 (34 <sup>o</sup> )	Inlet	59	63	71	76	79	80	82	76	86
HBF 100 T6 (A3:4) F400 (36 <sup>o</sup> )	Inlet	59	64	71	76	79	80	82	76	86
HBF 100 T6 (A3:4) F400 (38 <sup>o</sup> )	Inlet	59	65	72	77	80	81	82	76	87
HBF 100 T6 (A3:4) F400 (40 <sup>o</sup> )	Inlet	59	66	72	77	81	81	83	76	87
HBF 100 T6 (A3:4) F400 (42 <sup>o</sup> )	Inlet	60	67	73	79	82	82	83	78	89
HBF 100 T6 (A3:8) F400 (20 <sup>o</sup> )	Inlet	63	71	83	92	91	89	90	86	97
HBF 100 T6 (A3:8) F400 (22 <sup>o</sup> )	Inlet	63	71	82	90	89	88	89	85	96
HBF 100 T6 (A3:8) F400 (24 <sup>o</sup> )	Inlet	62	70	80	88	88	87	88	83	94
HBF 100 T6 (A3:8) F400 (26 <sup>o</sup> )	Inlet	62	70	79	86	87	87	87	82	93
HBF 100 T6 (A3:8) F400 (28 <sup>o</sup> )	Inlet	62	70	78	84	86	86	87	81	92
HBF 100 T6 (A3:8) F400 (30 <sup>o</sup> )	Inlet	62	69	77	82	85	86	86	80	92
HBF 100 T6 (A3:8) F400 (32 <sup>o</sup> )	Inlet	62	69	75	80	84	85	85	79	90
HBF 100 T6 (A3:8) F400 (34 <sup>o</sup> )	Inlet	61	68	73	78	82	84	85	78	89

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 100 T6 (A3:8) F400 (36º)	Inlet	61	68	73	78	82	84	84	78	89	
HBF 100 T6 (A3:8) F400 (38º)	Inlet	61	68	73	79	82	84	85	79	90	
HBF 100 T6 (A3:8) F400 (40º)	Inlet	62	69	74	79	83	85	85	79	90	
HBF 100 T6 (A3:8) F400 (42º)	Inlet	62	69	74	80	83	85	85	79	90	
HBF 112 T6 (A3:4) F400 (20º)	Inlet	56	68	73	80	84	85	87	82	91	
HBF 112 T6 (A3:4) F400 (22º)	Inlet	58	69	74	81	85	85	87	82	92	
HBF 112 T6 (A3:4) F400 (24º)	Inlet	59	69	74	80	84	85	86	81	91	
HBF 112 T6 (A3:4) F400 (26º)	Inlet	60	69	74	80	83	84	86	80	90	
HBF 112 T6 (A3:4) F400 (28º)	Inlet	61	69	74	79	83	84	85	79	90	
HBF 112 T6 (A3:4) F400 (30º)	Inlet	61	68	73	79	82	83	85	78	89	
HBF 112 T6 (A3:4) F400 (32º)	Inlet	61	67	73	78	81	83	84	78	89	
HBF 112 T6 (A3:4) F400 (34º)	Inlet	61	66	73	78	81	82	84	77	88	
HBF 112 T6 (A3:4) F400 (36º)	Inlet	61	67	73	78	81	82	84	77	88	
HBF 112 T6 (A3:4) F400 (38º)	Inlet	62	68	74	78	81	83	84	77	89	
HBF 112 T6 (A3:4) F400 (40º)	Inlet	63	69	75	79	82	84	84	78	89	
HBF 112 T6 (A3:4) F400 (42º)	Inlet	63	70	75	80	83	84	85	78	90	
HBF 112 T6 (A3:8) F400 (20º)	Inlet	64	72	82	91	91	93	93	88	99	
HBF 112 T6 (A3:8) F400 (22º)	Inlet	64	72	81	89	90	92	92	87	98	
HBF 112 T6 (A3:8) F400 (24º)	Inlet	64	71	80	88	90	91	91	86	96	
HBF 112 T6 (A3:8) F400 (26º)	Inlet	64	71	79	86	89	90	90	85	96	
HBF 112 T6 (A3:8) F400 (28º)	Inlet	64	71	79	85	89	90	90	84	95	
HBF 112 T6 (A3:8) F400 (30º)	Inlet	65	71	78	83	88	89	89	84	94	
HBF 112 T6 (A3:8) F400 (32º)	Inlet	64	71	77	82	86	88	88	82	93	
HBF 112 T6 (A3:8) F400 (34º)	Inlet	64	71	76	81	84	86	87	80	92	
HBF 112 T6 (A3:8) F400 (36º)	Inlet	63	70	75	80	84	86	86	79	91	
HBF 112 T6 (A3:8) F400 (38º)	Inlet	64	71	76	81	84	86	86	80	91	
HBF 112 T6 (A3:8) F400 (40º)	Inlet	64	71	76	81	85	87	86	80	92	
HBF 112 T6 (A3:8) F400 (42º)	Inlet	64	71	76	81	85	86	86	79	91	
HBF 125 T6 (A3:4) F400 (20º)	Inlet	63	76	81	89	92	92	94	91	99	
HBF 125 T6 (A3:4) F400 (22º)	Inlet	65	77	82	89	92	93	95	91	99	
HBF 125 T6 (A3:4) F400 (24º)	Inlet	66	75	80	87	90	91	93	88	98	
HBF 125 T6 (A3:4) F400 (26º)	Inlet	66	74	79	85	89	90	91	86	96	
HBF 125 T6 (A3:4) F400 (28º)	Inlet	66	73	78	83	87	88	89	84	94	
HBF 125 T6 (A3:4) F400 (30º)	Inlet	65	72	77	81	85	87	88	81	92	
HBF 125 T6 (A3:4) F400 (32º)	Inlet	64	71	76	81	84	86	87	80	92	
HBF 125 T6 (A3:4) F400 (34º)	Inlet	64	71	76	81	84	85	86	79	91	
HBF 125 T6 (A3:4) F400 (36º)	Inlet	64	71	76	81	83	85	86	79	91	
HBF 125 T6 (A3:4) F400 (38º)	Inlet	65	72	77	81	84	86	86	79	91	
HBF 125 T6 (A3:4) F400 (40º)	Inlet	65	72	77	82	84	86	87	80	92	

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 125 T6 (A3:4) F400 (42º)	Inlet	66	73	78	82	85	87	87	81	92	
HBF 125 T6 (A3:8) F400 (20º)	Inlet	69	77	84	93	98	101	101	95	106	
HBF 125 T6 (A3:8) F400 (22º)	Inlet	69	77	84	92	97	100	99	94	105	
HBF 125 T6 (A3:8) F400 (24º)	Inlet	69	76	83	90	96	98	98	92	103	
HBF 125 T6 (A3:8) F400 (26º)	Inlet	69	75	82	89	94	97	96	90	102	
HBF 125 T6 (A3:8) F400 (28º)	Inlet	68	74	81	87	93	95	95	89	100	
HBF 125 T6 (A3:8) F400 (30º)	Inlet	68	74	80	86	91	93	94	87	98	
HBF 125 T6 (A3:8) F400 (32º)	Inlet	68	74	80	85	90	92	92	85	97	
HBF 125 T6 (A3:8) F400 (34º)	Inlet	68	74	80	84	88	90	90	83	95	
HBF 125 T6 (A3:8) F400 (36º)	Inlet	67	74	79	84	87	89	89	82	94	
HBF 125 T6 (A3:8) F400 (38º)	Inlet	67	74	79	84	87	89	88	81	94	
HBF 125 T6 (A3:8) F400 (40º)	Inlet	67	74	79	83	87	89	87	81	93	
HBF 125 T6 (A3:8) F400 (42º)	Inlet	67	74	79	84	87	88	87	81	93	

## Sound / 4/8 poles

Sound power Lw dB (A)											
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 20º)	Inlet	37	42	49	57	59	60	58	50	65	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 25º)	Inlet	38	44	51	57	59	59	59	50	65	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 27º)	Inlet	39	46	54	57	59	59	60	50	65	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 30º)	Inlet	39	47	54	56	59	58	61	50	66	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 33º)	Inlet	37	47	55	56	58	57	60	50	64	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 35º)	Inlet	35	47	55	55	57	55	58	49	63	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 37º)	Inlet	36	47	55	56	58	57	59	50	64	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 40º)	Inlet	37	47	55	56	59	58	60	50	65	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 43º)	Inlet	38	47	54	56	60	59	60	50	66	
HBF 45 T4/T8 (A5:6) F400 (920 RPM - 45º)	Inlet	39	46	52	56	61	61	61	50	67	
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 20º)	Inlet	48	53	60	67	69	70	69	60	75	



Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 25°)	Inlet	49	55	62	67	69	70	70	61	75
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 27°)	Inlet	49	57	64	67	69	69	71	61	76
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 30°)	Inlet	49	58	65	67	70	69	71	61	76
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 33°)	Inlet	48	57	65	66	68	67	70	60	75
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 35°)	Inlet	46	57	65	65	67	66	69	60	74
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 37°)	Inlet	47	57	65	66	68	67	70	60	75
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 40°)	Inlet	48	58	65	67	70	69	71	61	76
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 43°)	Inlet	48	57	64	67	70	70	71	61	76
HBF 45 T4/T8 (A5:6) F400 (1420 RPM - 45°)	Inlet	50	57	63	67	72	72	72	61	77
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 20°)	Inlet	40	47	55	61	67	65	65	55	71
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 25°)	Inlet	38	45	53	59	63	62	63	53	68
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 27°)	Inlet	35	43	50	57	59	58	60	51	65
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 30°)	Inlet	34	43	50	56	58	57	60	50	64
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 33°)	Inlet	36	44	51	56	58	58	61	52	65
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 35°)	Inlet	37	46	52	57	57	58	62	53	66
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 37°)	Inlet	39	47	55	59	59	60	64	56	67
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 40°)	Inlet	40	48	57	61	61	62	65	58	69
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 43°)	Inlet	40	48	57	60	62	62	65	58	69
HBF 50 T4/T8 (A5:6) F400 (920 RPM - 45°)	Inlet	39	48	57	60	62	63	66	57	70
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 20°)	Inlet	50	57	65	71	77	75	75	66	81
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 25°)	Inlet	48	55	63	69	73	72	73	64	79
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 27°)	Inlet	45	54	61	67	70	69	71	61	76

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 30°)	Inlet	44	53	60	66	68	68	70	60	75
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 33°)	Inlet	46	55	61	67	68	68	71	62	75
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 35°)	Inlet	48	57	63	68	68	69	72	64	76
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 37°)	Inlet	49	58	65	69	70	70	74	66	78
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 40°)	Inlet	51	59	67	71	72	72	76	69	80
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 43°)	Inlet	50	59	67	71	72	73	76	68	80
HBF 50 T4/T8 (A5:6) F400 (1420 RPM - 45°)	Inlet	50	58	67	70	73	74	76	68	80
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 20°)	Inlet	50	57	62	63	64	62	60	52	70
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 25°)	Inlet	37	46	51	57	59	59	60	51	66
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 30°)	Inlet	46	56	63	65	65	63	61	53	71
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 35°)	Inlet	34	46	51	57	58	59	60	52	65
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 40°)	Inlet	40	53	63	69	68	62	60	51	73
HBF 56 T4/T8 (A5:6) F400 (750 RPM - 45°)	Inlet	45	57	72	78	75	64	60	51	81
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 20°)	Inlet	66	73	78	79	80	78	76	68	86
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 25°)	Inlet	53	62	67	73	75	75	76	67	82
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 30°)	Inlet	62	72	79	81	81	79	77	69	87
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 35°)	Inlet	50	62	67	73	74	75	76	68	81
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 40°)	Inlet	56	69	79	85	84	78	76	67	89
HBF 56 T4/T8 (A5:6) F400 (1500 RPM - 45°)	Inlet	60	73	88	94	91	80	76	67	96
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 20°)	Inlet	53	60	65	66	67	64	63	56	73
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 25°)	Inlet	39	48	53	58	62	61	61	54	67
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 30°)	Inlet	41	49	59	66	64	63	63	56	71

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 35°)	Inlet	37	49	54	58	62	61	63	56	68
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 40°)	Inlet	38	50	62	73	70	65	63	55	76
HBF 63 T4/T8 (A5:6) F400 (750 RPM - 45°)	Inlet	39	50	67	84	76	68	63	55	85
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 20°)	Inlet	69	76	81	82	83	80	79	72	89
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 25°)	Inlet	54	63	68	73	77	76	76	70	83
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 30°)	Inlet	57	65	75	82	80	79	79	72	87
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 35°)	Inlet	53	65	70	74	78	77	79	72	84
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 40°)	Inlet	54	66	77	89	86	81	79	71	92
HBF 63 T4/T8 (A5:6) F400 (1500 RPM - 45°)	Inlet	55	66	82	100	92	84	79	71	100
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 20°)	Inlet	56	63	68	70	70	68	67	60	76
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 25°)	Inlet	43	52	58	62	65	66	66	57	72
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 30°)	Inlet	44	53	59	65	66	66	65	56	72
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 35°)	Inlet	37	49	54	59	62	63	64	55	69
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 40°)	Inlet	41	52	67	76	72	68	66	56	79
HBF 71 T4/T8 (A5:6) F400 (750 RPM - 45°)	Inlet	45	54	76	89	80	71	67	56	90
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 20°)	Inlet	71	78	83	85	85	83	82	75	92
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 25°)	Inlet	58	68	74	78	81	82	82	73	88
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 30°)	Inlet	60	68	75	81	82	81	81	72	87
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 35°)	Inlet	53	65	70	75	78	79	80	71	84
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 40°)	Inlet	57	68	83	92	88	83	81	72	95
HBF 71 T4/T8 (A5:6) F400 (1500 RPM - 45°)	Inlet	61	70	92	105	96	87	83	72	105
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 20°)	Inlet	58	65	70	72	72	70	69	62	79

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 25°)	Inlet	45	52	58	63	65	65	66	58	72
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 30°)	Inlet	45	57	64	73	71	69	69	61	78
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 35°)	Inlet	42	54	60	68	73	71	71	62	78
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 40°)	Inlet	43	56	72	77	74	70	68	60	81
HBF 80 T4/T8 (A5:6) F400 (750 RPM - 45°)	Inlet	44	58	81	84	75	70	66	59	86
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 20°)	Inlet	74	81	86	88	88	86	85	78	94
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 25°)	Inlet	61	68	74	79	81	81	82	74	88
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 30°)	Inlet	61	72	79	89	87	85	85	77	93
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 35°)	Inlet	58	70	76	84	89	87	87	78	94
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 40°)	Inlet	59	72	88	93	90	86	84	76	97
HBF 80 T4/T8 (A5:6) F400 (1500 RPM - 45°)	Inlet	60	74	97	100	91	86	82	75	102
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 20°)	Inlet	67	68	66	71	72	71	69	63	78
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 22°)	Inlet	71	69	67	70	71	70	69	63	78
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 24°)	Inlet	73	70	68	70	70	69	68	62	79
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 26°)	Inlet	74	71	69	70	69	68	67	61	79
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 28°)	Inlet	75	72	70	70	68	67	67	61	80
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 30°)	Inlet	77	74	72	70	67	66	66	60	80
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 32°)	Inlet	76	73	71	69	67	66	66	60	80
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 34°)	Inlet	76	73	71	69	67	67	65	59	79
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 36°)	Inlet	76	73	71	69	68	67	66	59	80
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 38°)	Inlet	77	74	72	69	69	68	66	61	81
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 40°)	Inlet	78	75	73	70	71	68	67	62	82

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 90 T4/T8 (A3:4) F400 (750 RPM - 42°)	Inlet	79	76	74	71	72	69	68	63	83
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 20°)	Inlet	83	84	82	87	88	87	85	79	94
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 22°)	Inlet	87	85	83	86	87	86	85	78	94
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 24°)	Inlet	89	86	84	86	86	85	84	78	95
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 26°)	Inlet	90	87	85	86	85	84	83	77	95
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 28°)	Inlet	91	88	86	86	84	83	83	77	95
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 30°)	Inlet	92	89	87	86	83	82	82	76	96
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 32°)	Inlet	92	89	87	85	83	82	82	76	96
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 34°)	Inlet	91	88	86	84	83	83	81	75	95
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 36°)	Inlet	92	89	87	84	84	83	81	75	96
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 38°)	Inlet	93	90	88	85	85	83	82	77	97
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 40°)	Inlet	94	91	89	86	87	84	83	78	98
HBF 90 T4/T8 (A3:4) F400 (1500 RPM - 42°)	Inlet	95	92	90	87	88	85	84	79	99
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 20°)	Inlet	79	81	83	78	77	70	71	63	88
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 22°)	Inlet	79	80	81	77	76	71	71	63	87
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 24°)	Inlet	80	79	79	76	75	71	71	64	86
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 26°)	Inlet	80	78	77	75	74	71	71	64	85
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 28°)	Inlet	80	76	75	74	73	71	70	64	84
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 30°)	Inlet	78	75	73	73	72	71	70	64	83
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 32°)	Inlet	78	75	73	72	71	71	69	63	82
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 34°)	Inlet	77	74	72	71	71	70	68	62	81
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 36°)	Inlet	77	74	72	70	71	70	68	62	81

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 38°)	Inlet	79	76	74	71	71	70	68	62	83
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 40°)	Inlet	81	78	76	71	72	70	67	63	84
HBF 90 T4/T8 (A3:8) F400 (750 RPM - 42°)	Inlet	81	78	76	72	73	71	68	63	85
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 20°)	Inlet	95	97	99	94	93	86	87	79	104
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 22°)	Inlet	95	96	97	93	92	86	87	79	103
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 24°)	Inlet	95	95	95	92	91	87	87	79	102
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 26°)	Inlet	96	94	93	91	90	87	87	80	101
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 28°)	Inlet	96	92	91	90	89	87	86	80	100
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 30°)	Inlet	94	91	89	89	88	87	86	80	99
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 32°)	Inlet	93	90	88	88	87	86	85	79	98
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 34°)	Inlet	93	90	88	87	87	86	84	78	97
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 36°)	Inlet	93	90	88	86	87	86	84	78	97
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 38°)	Inlet	95	92	90	87	87	86	83	78	99
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 40°)	Inlet	97	94	92	87	88	86	83	79	100
HBF 90 T4/T8 (A3:8) F400 (1500 RPM - 42°)	Inlet	97	94	92	88	88	87	84	79	101
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 20°)	Inlet	50	60	66	72	76	76	77	74	82
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 22°)	Inlet	50	60	66	72	76	76	77	74	82
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 24°)	Inlet	51	60	66	72	75	76	77	73	82
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 26°)	Inlet	51	59	65	71	74	75	77	72	82
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 28°)	Inlet	51	59	65	71	74	75	77	71	81
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 30°)	Inlet	52	59	65	70	74	75	77	70	81
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 32°)	Inlet	52	58	65	70	73	74	76	70	80

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 34°)	Inlet	53	57	65	69	72	74	76	69	80
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 36°)	Inlet	53	57	65	70	72	74	75	69	80
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 38°)	Inlet	52	58	65	70	73	74	76	69	80
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 40°)	Inlet	52	59	66	71	75	75	76	70	81
HBF 100 T4/T8 (A3:4) F400 (750 RPM - 42°)	Inlet	53	61	67	72	76	76	77	71	82
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 20°)	Inlet	66	76	81	88	91	92	93	90	98
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 22°)	Inlet	66	76	82	88	91	92	93	90	98
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 24°)	Inlet	67	76	81	87	91	92	93	89	98
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 26°)	Inlet	67	75	81	87	90	91	93	88	97
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 28°)	Inlet	67	75	81	86	90	91	93	87	97
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 30°)	Inlet	68	74	81	86	90	91	93	86	97
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 32°)	Inlet	68	74	81	86	89	90	92	86	96
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 34°)	Inlet	69	73	81	85	88	90	91	85	96
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 36°)	Inlet	69	73	81	86	88	90	91	85	96
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 38°)	Inlet	68	74	81	86	89	90	92	85	96
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 40°)	Inlet	68	75	81	87	90	91	92	86	97
HBF 100 T4/T8 (A3:4) F400 (1500 RPM - 42°)	Inlet	69	77	83	88	92	92	93	87	98
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 20°)	Inlet	56	65	76	86	84	83	84	79	91
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 22°)	Inlet	56	64	75	84	83	82	83	78	90
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 24°)	Inlet	56	64	73	81	82	81	82	77	88
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 26°)	Inlet	56	63	72	79	80	80	81	76	87
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 28°)	Inlet	56	63	71	77	80	80	80	75	86

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 30°)	Inlet	56	63	70	75	79	79	80	74	85
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 32°)	Inlet	55	63	68	74	77	78	79	73	84
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 34°)	Inlet	55	62	67	72	76	77	78	72	83
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 36°)	Inlet	54	61	66	71	75	77	78	72	83
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 38°)	Inlet	55	62	67	72	76	78	78	72	83
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 40°)	Inlet	56	63	68	73	76	78	79	73	84
HBF 100 T4/T8 (A3:8) F400 (750 RPM - 42°)	Inlet	56	63	68	73	77	78	79	73	84
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 20°)	Inlet	72	81	92	102	100	99	100	95	107
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 22°)	Inlet	72	80	91	100	99	98	99	94	106
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 24°)	Inlet	72	79	89	97	97	97	98	93	104
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 26°)	Inlet	72	79	88	95	96	96	97	92	103
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 28°)	Inlet	72	79	87	93	96	95	96	91	102
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 30°)	Inlet	72	79	86	91	95	95	96	90	101
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 32°)	Inlet	71	79	84	90	93	94	95	89	100
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 34°)	Inlet	71	78	83	88	92	93	94	88	99
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 36°)	Inlet	70	77	82	87	91	93	94	87	99
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 38°)	Inlet	71	78	83	88	92	94	94	88	99
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 40°)	Inlet	71	79	84	89	92	94	95	89	100
HBF 100 T4/T8 (A3:8) F400 (1500 RPM - 42°)	Inlet	72	79	84	89	93	94	95	89	100
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 20°)	Inlet	50	62	67	74	78	78	80	76	85
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 22°)	Inlet	52	63	68	74	78	79	81	76	86
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 24°)	Inlet	53	62	67	74	77	78	80	75	85



Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 26°)	Inlet	54	62	67	73	77	78	79	74	84
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 28°)	Inlet	55	62	67	73	76	77	79	73	83
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 30°)	Inlet	55	62	67	72	76	77	78	72	83
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 32°)	Inlet	55	61	67	72	75	76	78	71	82
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 34°)	Inlet	54	60	66	71	74	76	77	70	82
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 36°)	Inlet	55	60	67	71	74	76	77	70	82
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 38°)	Inlet	55	61	67	72	75	76	78	71	82
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 40°)	Inlet	56	63	68	73	76	77	78	71	83
HBF 112 T4/T8 (A3:4) F400 (750 RPM - 42°)	Inlet	57	63	69	73	76	78	78	72	83
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 20°)	Inlet	66	78	83	90	94	94	96	92	101
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 22°)	Inlet	68	79	84	90	94	95	96	92	102
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 24°)	Inlet	69	78	83	90	93	94	96	91	101
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 26°)	Inlet	70	78	83	89	93	94	95	90	100
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 28°)	Inlet	71	78	83	89	92	93	95	89	99
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 30°)	Inlet	71	78	83	88	92	93	94	88	99
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 32°)	Inlet	70	77	82	88	91	92	94	87	98
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 34°)	Inlet	70	76	82	87	90	92	93	86	98
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 36°)	Inlet	71	76	83	87	90	92	93	86	98
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 38°)	Inlet	71	77	83	88	91	92	93	87	98
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 40°)	Inlet	72	79	84	89	91	93	94	87	99
HBF 112 T4/T8 (A3:4) F400 (1500 RPM - 42°)	Inlet	72	79	84	89	92	94	94	88	99
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 20°)	Inlet	57	66	76	85	85	87	87	81	93

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 22°)	Inlet	57	65	75	83	84	86	86	80	91
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 24°)	Inlet	57	65	74	81	83	85	85	79	90
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 26°)	Inlet	58	65	73	80	83	84	84	78	90
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 28°)	Inlet	58	65	72	78	82	83	83	78	89
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 30°)	Inlet	58	65	72	77	81	83	83	77	88
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 32°)	Inlet	58	65	70	76	80	81	81	75	87
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 34°)	Inlet	57	64	69	74	78	80	80	73	85
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 36°)	Inlet	57	64	69	74	77	79	80	73	85
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 38°)	Inlet	57	64	69	74	78	80	80	73	85
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 40°)	Inlet	58	65	70	74	78	80	80	74	86
HBF 112 T4/T8 (A3:8) F400 (750 RPM - 42°)	Inlet	58	65	70	75	78	80	79	73	85
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 20°)	Inlet	73	82	92	101	101	103	103	97	109
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 22°)	Inlet	73	81	91	99	100	102	102	96	107
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 24°)	Inlet	73	81	90	97	99	101	101	95	106
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 26°)	Inlet	74	81	89	96	98	100	100	94	106
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 28°)	Inlet	74	81	88	94	98	99	99	94	105
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 30°)	Inlet	74	80	87	93	97	99	99	93	104
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 32°)	Inlet	74	81	86	91	96	97	97	91	103
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 34°)	Inlet	73	80	85	90	94	96	96	89	101
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 36°)	Inlet	73	80	85	90	93	95	95	89	101
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 38°)	Inlet	73	80	85	90	94	96	95	89	101
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 40°)	Inlet	74	81	86	90	94	96	95	90	102

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 112 T4/T8 (A3:8) F400 (1500 RPM - 42º)	Inlet	73	80	85	91	94	96	95	89	101
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 20º)	Inlet	56	69	74	82	86	86	88	85	93
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 22º)	Inlet	59	70	75	82	86	87	89	85	93
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 24º)	Inlet	59	69	74	80	84	85	87	82	91
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 26º)	Inlet	60	68	73	78	82	83	85	80	90
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 28º)	Inlet	60	67	72	77	80	82	83	77	88
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 30º)	Inlet	58	65	70	75	79	80	81	75	86
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 32º)	Inlet	58	65	70	75	78	80	81	74	86
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 34º)	Inlet	58	65	70	74	77	79	80	72	85
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 36º)	Inlet	58	65	70	74	77	79	80	72	85
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 38º)	Inlet	58	65	70	75	77	79	80	73	85
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 40º)	Inlet	59	66	71	75	78	80	80	73	86
HBF 125 T4/T8 (A3:4) F400 (750 RPM - 42º)	Inlet	59	66	71	76	79	81	80	74	86
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 20º)	Inlet	72	85	90	98	102	102	104	101	109
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 22º)	Inlet	75	86	91	98	102	103	105	101	109
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 24º)	Inlet	75	85	90	96	100	101	103	98	107
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 26º)	Inlet	76	84	89	94	98	99	101	96	106
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 28º)	Inlet	75	82	87	93	96	98	99	93	104
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 30º)	Inlet	74	81	86	91	95	96	97	91	102
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 32º)	Inlet	74	81	86	90	94	96	96	90	102
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 34º)	Inlet	73	80	85	90	93	95	96	88	101
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 36º)	Inlet	74	81	86	90	93	95	96	88	101

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 38°)	Inlet	74	81	86	91	93	95	96	89	101
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 40°)	Inlet	75	82	87	91	93	96	96	89	102
HBF 125 T4/T8 (A3:4) F400 (1500 RPM - 42°)	Inlet	75	82	87	92	94	96	96	90	102
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 20°)	Inlet	62	71	78	87	92	95	94	89	99
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 22°)	Inlet	63	70	77	86	91	94	93	88	98
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 24°)	Inlet	62	70	76	84	90	92	92	86	97
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 26°)	Inlet	62	69	75	82	88	90	90	84	95
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 28°)	Inlet	62	68	75	81	86	89	89	82	94
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 30°)	Inlet	62	67	74	80	85	87	88	81	92
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 32°)	Inlet	61	67	73	79	83	86	86	79	91
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 34°)	Inlet	61	68	73	78	81	84	84	76	89
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 36°)	Inlet	61	68	73	77	81	83	82	75	88
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 38°)	Inlet	60	67	72	77	80	82	82	75	88
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 40°)	Inlet	60	67	72	77	80	82	81	74	87
HBF 125 T4/T8 (A3:8) F400 (750 RPM - 42°)	Inlet	60	67	72	77	80	82	80	74	87
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 20°)	Inlet	78	86	93	103	108	111	110	105	115
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 22°)	Inlet	79	86	93	102	107	110	109	104	114
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 24°)	Inlet	78	85	92	100	106	108	108	102	113
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 26°)	Inlet	78	85	91	98	104	106	106	100	111
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 28°)	Inlet	78	84	91	97	102	105	105	98	110
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 30°)	Inlet	77	83	90	96	101	103	104	97	108
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 32°)	Inlet	77	83	89	95	99	102	102	94	107

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 34°)	Inlet	77	83	89	94	97	99	100	92	105
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 36°)	Inlet	77	83	89	93	96	98	98	91	104
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 38°)	Inlet	76	83	88	93	96	98	97	91	104
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 40°)	Inlet	76	83	88	93	96	98	97	90	103
HBF 125 T4/T8 (A3:8) F400 (1500 RPM - 42°)	Inlet	76	83	88	93	96	98	96	90	103

## erp data

ERP	
Fan type	Axial fan
Installation category	A
Efficiency category	Static
The fan has to be installed with FSC	No

## ERP / 4 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m <sup>3</sup> /h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 45 T4 (A5:6) F400 (20 <sup>º</sup> )	0,75	27,85	38,62	2.288,23	86,54	0,20	-	1,00
HBF 45 T4 (A5:6) F400 (25 <sup>º</sup> )	0,75	28,65	39,08	2.554,96	90,21	0,22	-	1,00
HBF 45 T4 (A5:6) F400 (27,5 <sup>º</sup> )	0,75	28,90	39,19	2.657,79	92,31	0,24	-	1,00
HBF 45 T4 (A5:6) F400 (30 <sup>º</sup> )	0,75	29,32	39,26	2.909,69	97,36	0,27	-	1,00
HBF 45 T4 (A5:6) F400 (32,5 <sup>º</sup> )	0,75	28,68	38,36	3.137,65	97,13	0,29	-	1,00
HBF 45 T4 (A5:6) F400 (35 <sup>º</sup> )	0,75	27,89	37,31	3.357,63	97,63	0,32	-	1,00
HBF 45 T4 (A5:6) F400 (37,5 <sup>º</sup> )	0,75	26,70	35,88	3.542,21	96,38	0,35	-	1,00
HBF 45 T4 (A5:6) F400 (40 <sup>º</sup> )	0,75	25,38	34,33	3.749,79	94,54	0,39	-	1,00
HBF 45 T4 (A5:6) F400 (42,5 <sup>º</sup> )	0,75	21,91	30,51	3.946,82	86,79	0,44	-	1,00
HBF 50 T4 (A5:6) F400 (25 <sup>º</sup> )	0,75	35,10	44,66	3.652,94	106,43	0,31	-	1,00
HBF 50 T4 (A5:6) F400 (27,5 <sup>º</sup> )	0,75	34,87	44,24	3.812,04	108,57	0,33	-	1,00
HBF 50 T4 (A5:6) F400 (30 <sup>º</sup> )	0,75	34,38	43,31	4.191,59	114,50	0,39	-	1,00
HBF 50 T4 (A5:6) F400 (32,5 <sup>º</sup> )	0,75	33,09	41,73	4.494,96	114,29	0,43	-	1,00
HBF 50 T4 (A5:6) F400 (35 <sup>º</sup> )	0,75	31,96	40,32	4.788,94	115,56	0,48	-	1,00
HBF 50 T4 (A5:6) F400 (37,5 <sup>º</sup> )	0,75	30,14	38,24	5.108,76	112,63	0,52	-	1,00
HBF 50 T4 (A5:6) F400 (40 <sup>º</sup> )	0,75	28,29	36,12	5.439,64	110,64	0,58	-	1,00
HBF 50 T4 (A5:6) F400 (42,5 <sup>º</sup> )	0,75	24,40	31,81	5.764,29	103,39	0,67	-	1,00
HBF 56 T4 (A5:6) F400 (20 <sup>º</sup> )	0,75	45,60	54,38	4.478,93	148,81	0,41	-	1,00
HBF 56 T4 (A5:6) F400 (25 <sup>º</sup> )	0,75	48,78	57,04	5.808,19	148,73	0,50	-	1,00
HBF 56 T4 (A5:6) F400 (30 <sup>º</sup> )	0,75	49,96	57,74	6.778,11	152,82	0,59	-	1,00
HBF 56 T4 (A5:6) F400 (35 <sup>º</sup> )	0,75	46,99	54,14	7.876,22	160,17	0,74	-	1,00
HBF 56 T4 (A5:6) F400 (40 <sup>º</sup> )	1,10	38,65	44,74	9.048,55	169,98	1,09	-	1,00
HBF 56 T4 (A5:6) F400 (45 <sup>º</sup> )	1,50	34,52	40,02	9.736,74	173,85	1,35	-	1,00
HBF 63 T4 (A5:6) F400 (20 <sup>º</sup> )	0,75	58,53	66,55	6.355,92	174,52	0,54	-	1,00
HBF 63 T4 (A5:6) F400 (25 <sup>º</sup> )	0,75	56,44	63,66	7.725,21	182,76	0,72	-	1,00
HBF 63 T4 (A5:6) F400 (30 <sup>º</sup> )	1,10	49,58	55,52	9.455,48	213,97	1,15	-	1,00
HBF 63 T4 (A5:6) F400 (35 <sup>º</sup> )	1,50	45,82	51,18	10.626,06	219,74	1,43	-	1,00
HBF 63 T4 (A5:6) F400 (40 <sup>º</sup> )	2,20	42,39	47,13	12.399,99	220,92	1,79	-	1,00

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 63 T4 (A5:6) F400 (45º)	2,20	37,31	41,55	13.888,41	205,06	2,14	-	1,00
HBF 71 T4 (A5:6) F400 (20º)	0,75	57,24	64,21	8.318,90	190,43	0,79	-	1,00
HBF 71 T4 (A5:6) F400 (25º)	1,10	51,11	56,91	10.347,46	210,19	1,21	-	1,00
HBF 71 T4 (A5:6) F400 (30º)	1,50	49,69	54,68	12.411,49	229,67	1,63	-	1,00
HBF 71 T4 (A5:6) F400 (35º)	2,20	45,76	49,92	14.677,49	244,74	2,21	-	1,00
HBF 71 T4 (A5:6) F400 (40º)	3	42,05	45,76	16.394,17	241,08	2,60	-	1,00
HBF 71 T4 (A5:6) F400 (45º)	3	36,26	39,41	18.371,79	226,54	3,20	-	1,00
HBF 80 T4 (A5:6) F400 (20º)	2,20	50,90	56,72	9.680,70	227,70	1,21	-	1,00
HBF 80 T4 (A5:6) F400 (25º)	2,20	53,20	58,28	12.281,11	243,37	1,58	-	1,00
HBF 80 T4 (A5:6) F400 (30º)	2,20	56,94	60,89	17.140,62	282,45	2,38	-	1,00
HBF 80 T4 (A5:6) F400 (35º)	3	50,44	53,66	19.751,78	286,67	3,11	-	1,00
HBF 80 T4 (A5:6) F400 (40º)	4	47,95	50,57	22.365,43	298,91	3,87	-	1,00
HBF 80 T4 (A5:6) F400 (45º)	4	40,13	42,12	24.470,93	285,09	4,86	-	1,00
HBF 90 T4 (A3:4) F400 (20º)	3	48,09	51,85	15.955,78	277,88	2,56	-	1,00
HBF 90 T4 (A3:4) F400 (22º)	3	52,40	55,68	17.468,42	328,17	3,04	-	1,00
HBF 90 T4 (A3:4) F400 (24º)	4	51,41	54,28	18.884,96	346,57	3,54	-	1,00
HBF 90 T4 (A3:4) F400 (26º)	4	49,81	52,26	20.381,08	362,27	4,13	-	1,00
HBF 90 T4 (A3:4) F400 (28º)	5,50	48,96	51,04	21.823,74	380,31	4,72	-	1,00
HBF 90 T4 (A3:4) F400 (30º)	5,50	47,76	49,47	23.214,28	399	5,40	-	1,00
HBF 90 T4 (A3:4) F400 (32º)	5,50	46,18	47,67	24.413,97	398,02	5,84	-	1,00
HBF 90 T4 (A3:4) F400 (34º)	7,50	45,22	46,53	25.666,02	396,98	6,24	-	1,00
HBF 90 T4 (A3:4) F400 (36º)	7,50	43,09	44,16	27.097,43	393,25	6,82	-	1,00
HBF 90 T4 (A3:4) F400 (38º)	7,50	40,56	41,36	28.643,25	388,02	7,53	-	1,00
HBF 90 T4 (A3:4) F400 (40º)	11	39,80	40,36	30.598,14	379,44	8,22	-	1,00
HBF 90 T4 (A3:8) F400 (20º)	4	45,66	47,95	18.691,31	366,04	4,36	-	1,00
HBF 90 T4 (A3:8) F400 (22º)	5,50	50,85	52,75	20.492,72	434,30	5,04	-	1,00
HBF 90 T4 (A3:8) F400 (24º)	5,50	49,94	51,43	22.351,51	455,04	5,85	-	1,00
HBF 90 T4 (A3:8) F400 (26º)	7,50	49,93	51,08	24.309,22	475,44	6,64	-	1,00
HBF 90 T4 (A3:8) F400 (28º)	7,50	48,96	49,73	26.219,52	496,13	7,60	-	1,00
HBF 90 T4 (A3:8) F400 (30º)	11	48,58	49,03	28.118,79	518,15	8,54	-	1,00
HBF 90 T4 (A3:8) F400 (32º)	11	47,05	47,23	29.635,83	527,28	9,42	-	1,00
HBF 90 T4 (A3:8) F400 (34º)	11	45,31	45,37	31.030,42	536,47	10,36	-	1,00
HBF 90 T4 (A3:8) F400 (36º)	11	44,02	44,01	32.403,99	548,99	11,32	-	1,00
HBF 90 T4 (A3:8) F400 (38º)	15	43,36	43,29	33.748,52	564,61	12,17	-	1,00
HBF 90 T4 (A3:8) F400 (40º)	15	41,87	41,74	34.989,69	579,72	13,30	-	1,00
HBF 90 T4 (A3:8) F400 (42º)	15	40,32	40,11	36.672,46	582,67	14,53	-	1,00
HBF 100 T4 (A3:4) F400 (20º)	5,50	54,31	56,80	22.194,39	356,83	4,07	-	1,00
HBF 100 T4 (A3:4) F400 (22º)	5,50	59,38	61,51	23.962,35	411,40	4,63	-	1,00

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 100 T4 (A3:4) F400 (24º)	5,50	57,70	59,48	25.849,24	421,62	5,26	-	1,00
HBF 100 T4 (A3:4) F400 (26º)	5,50	56,12	57,55	27.859,73	431,55	5,97	-	1,00
HBF 100 T4 (A3:4) F400 (28º)	7,50	55,38	56,52	29.732,15	443,68	6,63	-	1,00
HBF 100 T4 (A3:4) F400 (30º)	7,50	53,61	54,44	31.667,92	453,69	7,46	-	1,00
HBF 100 T4 (A3:4) F400 (32º)	11	52,21	52,78	33.359,85	461,34	8,19	-	1,00
HBF 100 T4 (A3:4) F400 (34º)	11	50,33	50,62	35.182,49	468,19	9,07	-	1,00
HBF 100 T4 (A3:4) F400 (36º)	11	47,95	48,03	37.414,86	466,31	10,04	-	1,00
HBF 100 T4 (A3:4) F400 (38º)	11	46,64	46,64	40.156,68	457,72	11,10	-	1,00
HBF 100 T4 (A3:4) F400 (40º)	15	45,09	45,02	42.939,43	451,39	12,17	-	1,00
HBF 100 T4 (A3:4) F400 (42º)	15	40,34	40,19	47.442,20	410,21	13,47	-	1,00
HBF 100 T4 (A3:8) F400 (20º)	7,50	53,05	53,85	26.682,88	528,77	7,53	-	1,00
HBF 100 T4 (A3:8) F400 (22º)	11	59,14	59,67	28.932,88	598,16	8,30	-	1,00
HBF 100 T4 (A3:8) F400 (24º)	11	57,84	58,08	31.096,46	605,57	9,24	-	1,00
HBF 100 T4 (A3:8) F400 (26º)	11	56,33	56,39	33.251,27	615,16	10,31	-	1,00
HBF 100 T4 (A3:8) F400 (28º)	11	54,74	54,72	35.417,64	622,91	11,47	-	1,00
HBF 100 T4 (A3:8) F400 (30º)	15	53,79	53,70	37.563,11	630,92	12,57	-	1,00
HBF 100 T4 (A3:8) F400 (32º)	15	52,25	52,07	39.660,55	649,91	13,96	-	1,00
HBF 100 T4 (A3:8) F400 (34º)	15	50,59	50,33	41.700,32	668,77	15,50	-	1,00
HBF 100 T4 (A3:8) F400 (36º)	18,50	49,21	48,88	43.871,45	686,20	17,08	-	1,00
HBF 100 T4 (A3:8) F400 (38º)	18,50	47,78	47,37	45.992,03	703,90	18,77	-	1,00
HBF 100 T4 (A3:8) F400 (40º)	22	46,26	45,77	48.308	719,29	20,65	-	1,00
HBF 100 T4 (A3:8) F400 (42º)	22	44,22	43,67	51.053,71	712,96	22,68	-	1,00
HBF 112 T4 (A3:4) F400 (20º)	7,50	56,89	58,67	18.300	572,72	5,27	-	1,00
HBF 112 T4 (A3:4) F400 (22º)	7,50	58,51	59,69	30.542,16	455,36	6,54	-	1,00
HBF 112 T4 (A3:4) F400 (24º)	7,50	57,69	58,55	34.380,35	445,89	7,39	-	1,00
HBF 112 T4 (A3:4) F400 (26º)	11	57,59	58,16	37.870,79	447,18	8,20	-	1,00
HBF 112 T4 (A3:4) F400 (28º)	11	56,91	57,18	40.862,52	458,02	9,16	-	1,00
HBF 112 T4 (A3:4) F400 (30º)	11	56,25	56,32	43.399,71	474,39	10,17	-	1,00
HBF 112 T4 (A3:4) F400 (32º)	11	54,48	54,48	45.916,32	481,99	11,26	-	1,00
HBF 112 T4 (A3:4) F400 (34º)	15	52,65	52,56	48.439,72	490,42	12,47	-	1,00
HBF 112 T4 (A3:4) F400 (36º)	15	49,58	49,41	51.224,50	485,51	13,82	-	1,00
HBF 112 T4 (A3:4) F400 (38º)	15	47,48	47,23	57.078,40	451,12	15,27	-	1,00
HBF 112 T4 (A3:4) F400 (40º)	18,50	44,66	44,35	60.435,65	436,73	16,64	-	1,00
HBF 112 T4 (A3:8) F400 (20º)	11	57,06	57,12	32.770,46	642,99	10,29	-	1,00
HBF 112 T4 (A3:8) F400 (22º)	11	62,14	62,13	36.629,30	686,10	11,28	-	1,00
HBF 112 T4 (A3:8) F400 (24º)	15	61,81	61,72	40.603,20	674,28	12,36	-	1,00
HBF 112 T4 (A3:8) F400 (26º)	15	60,50	60,33	44.666,32	665,08	13,76	-	1,00
HBF 112 T4 (A3:8) F400 (28º)	15	59,19	58,94	48.542,97	663,39	15,30	-	1,00



Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 112 T4 (A3:8) F400 (30º)	18,50	58,45	58,13	52.209,90	667,35	16,84	-	1,00
HBF 112 T4 (A3:8) F400 (32º)	18,50	56,39	55,97	55.017,35	695,59	18,97	-	1,00
HBF 112 T4 (A3:8) F400 (34º)	22	54,48	53,97	58.008,26	720,74	21,27	-	1,00
HBF 112 T4 (A3:8) F400 (36º)	22	52,76	52,18	60.935,16	734,95	23,37	-	1,00
HBF 112 T4 (A3:8) F400 (38º)	30	51,41	50,78	63.739,94	739,44	25,08	-	1,00
HBF 112 T4 (A3:8) F400 (40º)	30	51	50,31	66.443,30	746,01	27,25	-	1,00
HBF 112 T4 (A3:8) F400 (42º)	30	48,22	47,45	72.330,57	711,69	29,92	-	1,00
HBF 125 T4 (A3:4) F400 (20º)	11	57,35	57,78	24.700	700,21	8,63	-	1,00
HBF 125 T4 (A3:4) F400 (22º)	11	57,36	57,39	41.357,73	540,18	10,72	-	1,00
HBF 125 T4 (A3:4) F400 (24º)	15	56,97	56,91	46.668,70	526,27	11,99	-	1,00
HBF 125 T4 (A3:4) F400 (26º)	15	56,50	56,35	51.229,46	530,95	13,42	-	1,00
HBF 125 T4 (A3:4) F400 (28º)	15	55,59	55,35	55.317,73	543,13	15,05	-	1,00
HBF 125 T4 (A3:4) F400 (30º)	18,50	55,35	55,04	58.653,69	563,55	16,59	-	1,00
HBF 125 T4 (A3:4) F400 (32º)	18,50	53,74	53,35	62.010,38	573,01	18,33	-	1,00
HBF 125 T4 (A3:4) F400 (34º)	22	51,46	50,98	65.637,51	581,45	20,49	-	1,00
HBF 125 T4 (A3:4) F400 (36º)	22	48,46	47,91	69.151,38	577,59	22,70	-	1,00
HBF 125 T4 (A3:4) F400 (38º)	30	46,75	46,12	77.027,17	536,30	24,86	-	1,00
HBF 125 T4 (A3:4) F400 (40º)	30	43,73	43,03	81.637,62	519,11	27,28	-	1,00
HBF 125 T4 (A3:8) F400 (20º)	18,50	57,88	57,56	44.261,47	787,70	16,78	-	1,00
HBF 125 T4 (A3:8) F400 (22º)	18,50	61,26	60,87	49.676,80	811,37	18,33	-	1,00
HBF 125 T4 (A3:8) F400 (24º)	22	60,36	59,89	54.991,48	798,35	20,32	-	1,00
HBF 125 T4 (A3:8) F400 (26º)	22	59,09	58,54	60.245,29	792,18	22,60	-	1,00
HBF 125 T4 (A3:8) F400 (28º)	30	58,26	57,63	65.458,88	790,73	24,97	-	1,00
HBF 125 T4 (A3:8) F400 (30º)	30	57,12	56,41	70.166,20	798,20	27,60	-	1,00
HBF 125 T4 (A3:8) F400 (32º)	30	55,32	54,51	74.313,29	828,18	31,09	-	1,00
HBF 125 T4 (A3:8) F400 (34º)	37	53,53	52,65	78.065,56	858,03	34,65	-	1,00
HBF 125 T4 (A3:8) F400 (36º)	37	51,96	51	82.466,57	872,89	38,14	-	1,00
HBF 125 T4 (A3:8) F400 (38º)	45	50,50	49,48	86.364,05	877,23	41,14	-	1,00
HBF 125 T4 (A3:8) F400 (40º)	45	49,96	48,87	89.685,29	885,60	44,66	-	1,00
HBF 125 T4 (A3:8) F400 (42º)	45	47,15	45,99	97.487,97	845,08	49,03	-	1,00

**ERP / 6 poles**

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 50 T6 (A5:6) F400 (25º)	0,75	20,45	32,09	2.361,61	44,83	0,14	-	1,00

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 50 T6 (A5:6) F400 (27,5º)	0,75	20,95	32,48	2.477,40	45,55	0,15	-	1,00
HBF 50 T6 (A5:6) F400 (30º)	0,75	21,92	33,19	2.720	47,94	0,17	-	1,00
HBF 50 T6 (A5:6) F400 (32,5º)	0,75	22,01	33,09	2.907,09	48,24	0,18	-	1,00
HBF 50 T6 (A5:6) F400 (35º)	0,75	21,93	32,81	3.101,82	48,51	0,19	-	1,00
HBF 50 T6 (A5:6) F400 (37,5º)	0,75	21,34	32,06	3.305,09	47,40	0,20	-	1,00
HBF 50 T6 (A5:6) F400 (40º)	0,75	20,58	31,10	3.512,84	46,51	0,22	-	1,00
HBF 50 T6 (A5:6) F400 (42,5º)	0,75	18,60	28,84	3.736,18	43,43	0,24	-	1,00
HBF 56 T6 (A5:6) F400 (20º)	0,75	30,74	41,79	2.985,99	66,14	0,18	-	1,00
HBF 56 T6 (A5:6) F400 (25º)	0,75	34,88	45,56	3.872,15	66,10	0,21	-	1,00
HBF 56 T6 (A5:6) F400 (30º)	0,75	37,52	47,86	4.518,74	67,92	0,23	-	1,00
HBF 56 T6 (A5:6) F400 (35º)	0,75	37,62	47,49	5.250,82	71,19	0,28	-	1,00
HBF 56 T6 (A5:6) F400 (40º)	0,75	33,18	42,19	6.032,36	75,54	0,38	-	1,00
HBF 56 T6 (A5:6) F400 (45º)	0,75	30,38	38,86	6.491,16	77,27	0,46	-	1,00
HBF 63 T6 (A5:6) F400 (20º)	0,75	42,90	53,41	4.237,23	77,56	0,22	-	1,00
HBF 63 T6 (A5:6) F400 (25º)	0,75	44,67	54,61	5.150,08	81,23	0,27	-	1,00
HBF 63 T6 (A5:6) F400 (30º)	0,75	42,92	51,80	6.303,64	95,10	0,39	-	1,00
HBF 63 T6 (A5:6) F400 (35º)	0,75	40,52	48,88	7.084,04	97,66	0,48	-	1,00
HBF 63 T6 (A5:6) F400 (40º)	0,75	37,24	44,97	8.267,83	98,18	0,60	-	1,00
HBF 63 T6 (A5:6) F400 (45º)	0,75	33,26	40,52	9.258,93	91,14	0,71	-	1,00
HBF 71 T6 (A5:6) F400 (20º)	0,75	46,42	56,16	5.545,82	84,64	0,29	-	1,00
HBF 71 T6 (A5:6) F400 (25º)	0,75	44,63	53,40	6.898,31	93,42	0,41	-	1,00
HBF 71 T6 (A5:6) F400 (30º)	0,75	44,66	52,69	8.274,35	102,07	0,54	-	1,00
HBF 71 T6 (A5:6) F400 (35º)	0,75	40,87	48,06	9.784,98	108,77	0,73	-	1,00
HBF 71 T6 (A5:6) F400 (40º)	0,75	37,68	44,42	10.928,58	107,15	0,86	-	1,00
HBF 71 T6 (A5:6) F400 (45º)	0,75	32,30	38,46	12.247,88	100,69	1,06	-	1,00
HBF 80 T6 (A5:6) F400 (20º)	0,75	43,60	52,33	6.453,80	101,20	0,42	-	1,00
HBF 80 T6 (A5:6) F400 (25º)	0,75	46,30	54,33	8.187,39	108,16	0,54	-	1,00
HBF 80 T6 (A5:6) F400 (30º)	0,75	51,10	58,09	11.446,42	125,31	0,78	-	1,00
HBF 80 T6 (A5:6) F400 (35º)	1,10	46,50	52,83	13.171,67	127,37	1	-	1,00
HBF 80 T6 (A5:6) F400 (40º)	1,10	43,85	49,56	14.924,27	132,73	1,25	-	1,00
HBF 80 T6 (A5:6) F400 (45º)	1,50	37,85	43,02	16.929,39	122,52	1,53	-	1,00
HBF 90 T6 (A3:4) F400 (20º)	1,50	43,17	50,20	10.372,34	115,88	0,77	-	1,00
HBF 90 T6 (A3:4) F400 (22º)	1,50	48,09	54,71	11.334,84	137,59	0,90	-	1,00
HBF 90 T6 (A3:4) F400 (24º)	1,50	47,35	53,56	12.281,93	144,82	1,05	-	1,00
HBF 90 T6 (A3:4) F400 (26º)	1,50	46,38	52,19	13.207,65	152,08	1,21	-	1,00
HBF 90 T6 (A3:4) F400 (28º)	1,50	45,28	50,72	14.055,75	160,37	1,39	-	1,00
HBF 90 T6 (A3:4) F400 (30º)	1,50	44,07	49,13	15.018,14	167,35	1,59	-	1,00
HBF 90 T6 (A3:4) F400 (32º)	1,50	42,45	47,29	15.824,99	166,38	1,72	-	1,00

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 90 T6 (A3:4) F400 (34º)	2,20	42,12	46,81	16.659,62	166,43	1,82	-	1,00
HBF 90 T6 (A3:4) F400 (36º)	2,20	40,22	44,67	17.612	164,58	1,99	-	1,00
HBF 90 T6 (A3:4) F400 (38º)	2,20	37,96	42,15	18.587,23	162,78	2,19	-	1,00
HBF 90 T6 (A3:4) F400 (40º)	2,20	37,01	40,92	19.857,45	159,96	2,42	-	1,00
HBF 90 T6 (A3:4) F400 (42º)	3	34,55	38,25	21.820,91	147,55	2,61	-	1,00
HBF 90 T6 (A3:8) F400 (20º)	1,50	42,52	48,20	12.101,08	153,60	1,27	-	1,00
HBF 90 T6 (A3:8) F400 (22º)	1,50	47,13	52,39	13.303,16	181,23	1,48	-	1,00
HBF 90 T6 (A3:8) F400 (24º)	1,50	46,19	51,03	14.534,86	190,08	1,72	-	1,00
HBF 90 T6 (A3:8) F400 (26º)	2,20	46,39	50,92	15.689,43	200,22	1,93	-	1,00
HBF 90 T6 (A3:8) F400 (28º)	2,20	45,78	49,93	16.980,47	208,34	2,21	-	1,00
HBF 90 T6 (A3:8) F400 (30º)	2,20	44,88	48,68	18.213,61	216,99	2,51	-	1,00
HBF 90 T6 (A3:8) F400 (32º)	3	44,24	47,82	19.215,68	221,40	2,73	-	1,00
HBF 90 T6 (A3:8) F400 (34º)	3	42,60	45,92	20.092,17	226,04	3	-	1,00
HBF 90 T6 (A3:8) F400 (36º)	3	41,35	44,43	20.986,18	230,56	3,28	-	1,00
HBF 90 T6 (A3:8) F400 (38º)	4	40,75	43,64	21.866,75	236,59	3,52	-	1,00
HBF 90 T6 (A3:8) F400 (40º)	4	39,47	42,11	22.653,78	243,30	3,84	-	1,00
HBF 90 T6 (A3:8) F400 (42º)	4	37,91	40,31	23.711,75	245,06	4,20	-	1,00
HBF 100 T6 (A3:4) F400 (20º)	1,50	50,17	56,01	14.394,01	149,20	1,19	-	1,00
HBF 100 T6 (A3:4) F400 (22º)	1,50	54,81	60,30	15.545,02	171,96	1,36	-	1,00
HBF 100 T6 (A3:4) F400 (24º)	1,50	53,41	58,55	16.770,57	176,86	1,55	-	1,00
HBF 100 T6 (A3:4) F400 (26º)	1,50	51,73	56,52	18.003,41	181,34	1,76	-	1,00
HBF 100 T6 (A3:4) F400 (28º)	2,20	51,68	56,20	19.350,37	185,52	1,93	-	1,00
HBF 100 T6 (A3:4) F400 (30º)	2,20	50,16	54,37	20.487,93	190,81	2,17	-	1,00
HBF 100 T6 (A3:4) F400 (32º)	2,20	48,28	52,20	21.706,82	192,99	2,41	-	1,00
HBF 100 T6 (A3:4) F400 (34º)	3	47,18	50,86	22.815,46	196,23	2,63	-	1,00
HBF 100 T6 (A3:4) F400 (36º)	3	45,04	48,45	24.161,47	196,20	2,90	-	1,00
HBF 100 T6 (A3:4) F400 (38º)	3	43,56	46,69	25.903,29	192,63	3,22	-	1,00
HBF 100 T6 (A3:4) F400 (40º)	4	42,51	45,40	27.969,69	188,66	3,52	-	1,00
HBF 100 T6 (A3:4) F400 (42º)	4	37,83	40,44	30.782,97	171,52	3,89	-	1,00
HBF 100 T6 (A3:8) F400 (20º)	2,20	49,65	53,83	17.337,10	220,98	2,19	-	1,00
HBF 100 T6 (A3:8) F400 (22º)	2,20	54,72	58,61	18.711,45	252,11	2,44	-	1,00
HBF 100 T6 (A3:8) F400 (24º)	3	54,40	58,04	20.204,35	253,87	2,68	-	1,00
HBF 100 T6 (A3:8) F400 (26º)	3	52,85	56,18	21.565,89	257,65	2,99	-	1,00
HBF 100 T6 (A3:8) F400 (28º)	3	51,34	54,38	22.932,51	261,44	3,32	-	1,00
HBF 100 T6 (A3:8) F400 (30º)	4	50,61	53,41	24.326,85	264,59	3,63	-	1,00
HBF 100 T6 (A3:8) F400 (32º)	4	49,16	51,67	25.593,12	273,88	4,03	-	1,00
HBF 100 T6 (A3:8) F400 (34º)	4	47,66	49,88	27.052,34	280,58	4,48	-	1,00
HBF 100 T6 (A3:8) F400 (36º)	5,50	42,47	44,19	28.448,08	287,70	5,38	-	1,00

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 100 T6 (A3:8) F400 (38º)	5,50	41,45	42,92	29.817,81	295,29	5,88	-	1,00
HBF 100 T6 (A3:8) F400 (40º)	5,50	40,49	41,72	31.376,77	301,29	6,42	-	1,00
HBF 100 T6 (A3:8) F400 (42º)	7,50	42,58	43,82	33.124,25	298,63	6,40	-	1,00
HBF 112 T6 (A3:4) F400 (20º)	2,20	52,70	57,84	11.800	241,17	1,55	-	1,00
HBF 112 T6 (A3:4) F400 (22º)	2,20	54,66	59,23	19.562,18	193,94	1,91	-	1,00
HBF 112 T6 (A3:4) F400 (24º)	2,20	53,95	58,19	22.280,91	187,04	2,15	-	1,00
HBF 112 T6 (A3:4) F400 (26º)	2,20	53,36	57,28	24.525,18	187,91	2,41	-	1,00
HBF 112 T6 (A3:4) F400 (28º)	3	53,39	57,04	26.491,83	192,02	2,65	-	1,00
HBF 112 T6 (A3:4) F400 (30º)	3	52,78	56,15	28.158,01	198,68	2,94	-	1,00
HBF 112 T6 (A3:4) F400 (32º)	3	51,08	54,17	29.720,12	202,34	3,26	-	1,00
HBF 112 T6 (A3:4) F400 (34º)	4	49,71	52,54	31.370,35	206,44	3,60	-	1,00
HBF 112 T6 (A3:4) F400 (36º)	4	46,68	49,22	33.191,85	203,79	3,99	-	1,00
HBF 112 T6 (A3:4) F400 (38º)	4	44,76	47,03	36.937,67	189,69	4,41	-	1,00
HBF 112 T6 (A3:4) F400 (40º)	5,50	38,47	40,26	39.054,54	183,68	5,25	-	1,00
HBF 112 T6 (A3:8) F400 (20º)	3	53,70	57,04	21.268,06	270,25	2,98	-	1,00
HBF 112 T6 (A3:8) F400 (22º)	3	58,40	61,49	23.817,12	287,07	3,26	-	1,00
HBF 112 T6 (A3:8) F400 (24º)	4	58,14	60,98	26.404,43	281,19	3,57	-	1,00
HBF 112 T6 (A3:8) F400 (26º)	4	56,91	59,46	28.917,33	279,32	3,98	-	1,00
HBF 112 T6 (A3:8) F400 (28º)	4	55,77	58,02	31.510,82	277,87	4,42	-	1,00
HBF 112 T6 (A3:8) F400 (30º)	5,50	50,31	52,06	33.766,81	280,75	5,32	-	1,00
HBF 112 T6 (A3:8) F400 (32º)	5,50	49,06	50,51	35.671,31	292,31	5,93	-	1,00
HBF 112 T6 (A3:8) F400 (34º)	5,50	47,79	48,95	37.578,51	302,47	6,59	-	1,00
HBF 112 T6 (A3:8) F400 (36º)	7,50	50,81	51,97	39.389,52	308,78	6,59	-	1,00
HBF 112 T6 (A3:8) F400 (38º)	7,50	50,36	51,32	41.151,83	311,60	7,12	-	1,00
HBF 112 T6 (A3:8) F400 (40º)	7,50	48,78	49,51	43.015,42	313,12	7,74	-	1,00
HBF 112 T6 (A3:8) F400 (42º)	11	46,47	46,95	46.814,99	299,03	8,45	-	1,00
HBF 125 T6 (A3:4) F400 (20º)	3	53,80	57,62	16.000	294,06	2,50	-	1,00
HBF 125 T6 (A3:4) F400 (22º)	3	53,77	57	26.654,60	227,73	3,10	-	1,00
HBF 125 T6 (A3:4) F400 (24º)	4	53,78	56,71	30.129,23	222,05	3,46	-	1,00
HBF 125 T6 (A3:4) F400 (26º)	4	53,18	55,80	33.080,89	223,68	3,88	-	1,00
HBF 125 T6 (A3:4) F400 (28º)	4	52,38	54,69	35.846,93	227,96	4,34	-	1,00
HBF 125 T6 (A3:4) F400 (30º)	5,50	47,70	49,49	37.887,16	237,03	5,23	-	1,00
HBF 125 T6 (A3:4) F400 (32º)	5,50	46,57	48,11	40.142,76	240,63	5,75	-	1,00
HBF 125 T6 (A3:4) F400 (34º)	5,50	44,96	46,22	42.431,82	244,37	6,37	-	1,00
HBF 125 T6 (A3:4) F400 (36º)	7,50	46,72	47,97	44.903,02	241,95	6,40	-	1,00
HBF 125 T6 (A3:4) F400 (38º)	7,50	44,94	45,92	49.891,55	225,54	7,05	-	1,00
HBF 125 T6 (A3:4) F400 (40º)	7,50	41,77	42,48	53.076,30	216,91	7,76	-	1,00
HBF 125 T6 (A3:8) F400 (20º)	5,50	49,84	51,61	28.716,26	329,81	5,29	-	1,00

Model	Maximum efficiency point data							
	Motor power (kW)	Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m <sup>3</sup> /h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HBF 125 T6 (A3:8) F400 (22°)	5,50	53,20	54,74	32.165,87	341,03	5,74	-	1,00
HBF 125 T6 (A3:8) F400 (24°)	5,50	52,67	53,94	35.561,95	335,93	6,33	-	1,00
HBF 125 T6 (A3:8) F400 (26°)	7,50	56,96	58,22	39.094,02	331,72	6,38	-	1,00
HBF 125 T6 (A3:8) F400 (28°)	7,50	55,88	56,85	42.485,61	331,26	7,08	-	1,00
HBF 125 T6 (A3:8) F400 (30°)	7,50	54,75	55,44	45.722,51	332,64	7,85	-	1,00
HBF 125 T6 (A3:8) F400 (32°)	11	53,25	53,63	48.156,13	347,56	8,78	-	1,00
HBF 125 T6 (A3:8) F400 (34°)	11	51,48	51,55	50.671,24	360,10	9,81	-	1,00
HBF 125 T6 (A3:8) F400 (36°)	11	49,88	49,91	53.155,55	367,62	10,78	-	1,00
HBF 125 T6 (A3:8) F400 (38°)	11	48,38	48,35	55.698,31	369,31	11,64	-	1,00
HBF 125 T6 (A3:8) F400 (40°)	15	48,51	48,42	58.270,22	371,52	12,52	-	1,00
HBF 125 T6 (A3:8) F400 (42°)	15	45,98	45,82	63.098,04	356,38	13,73	-	1,00